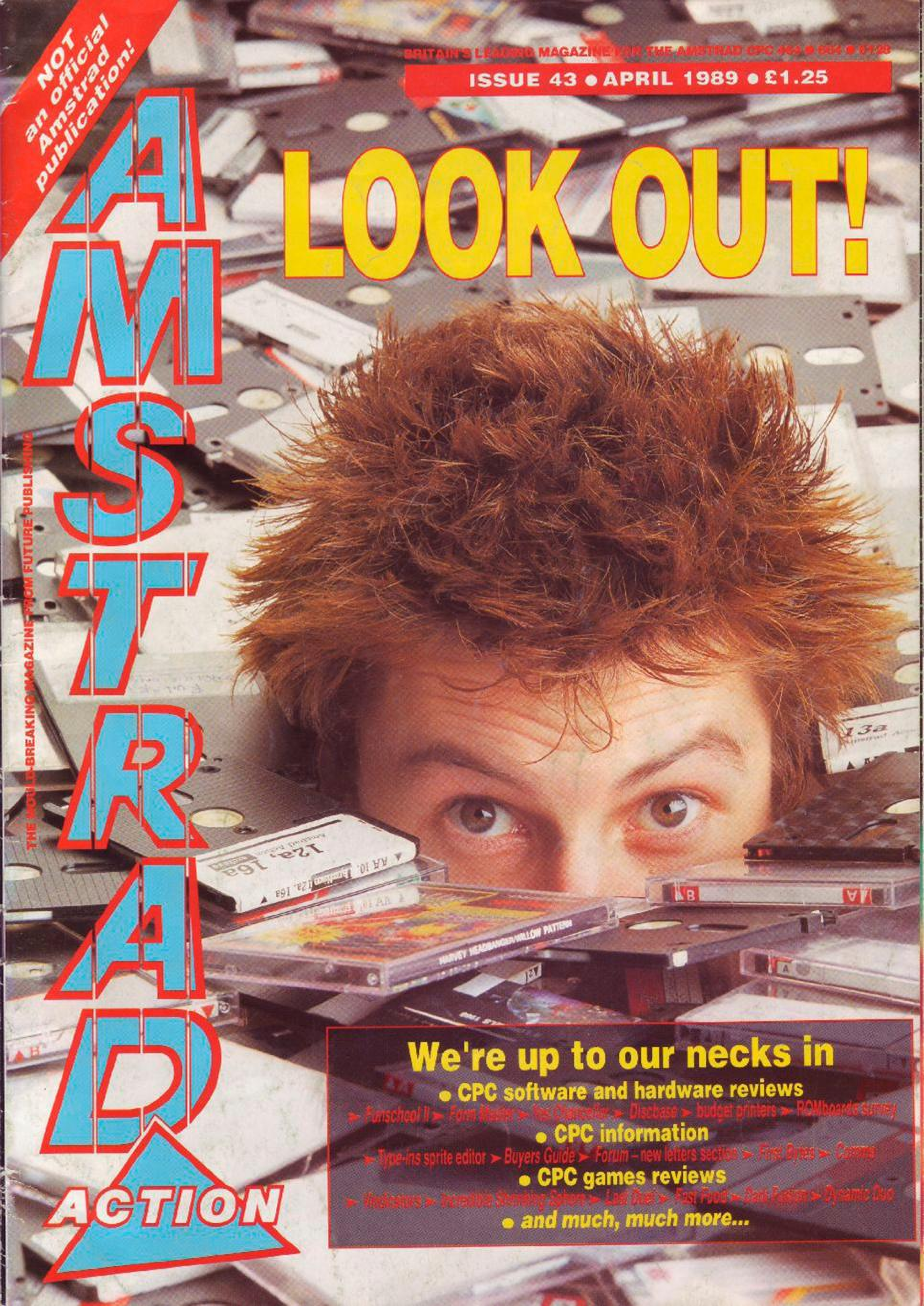
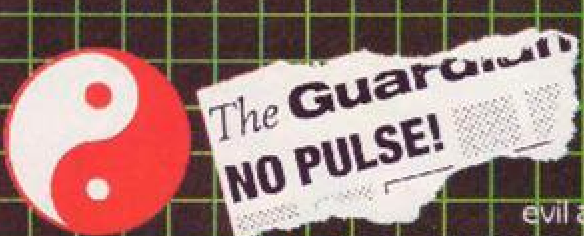

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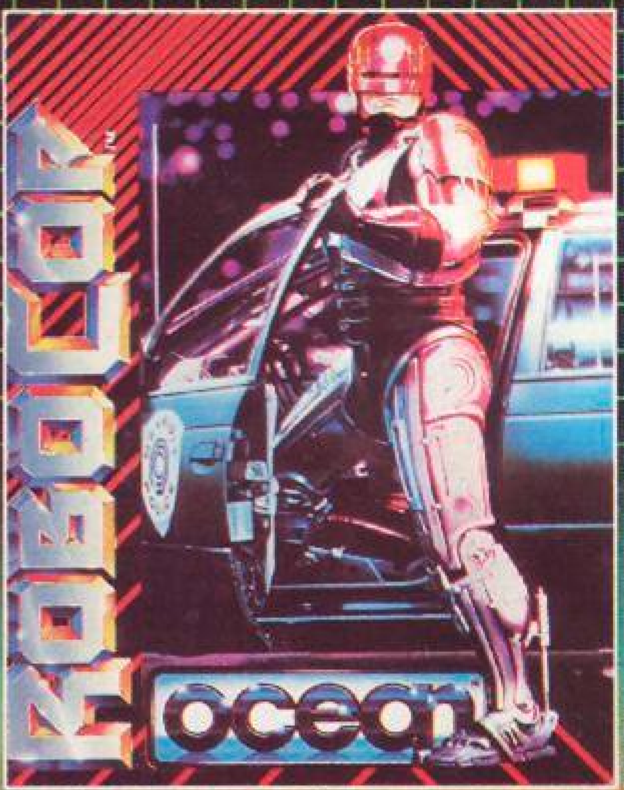
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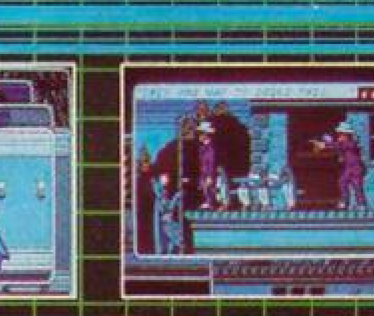


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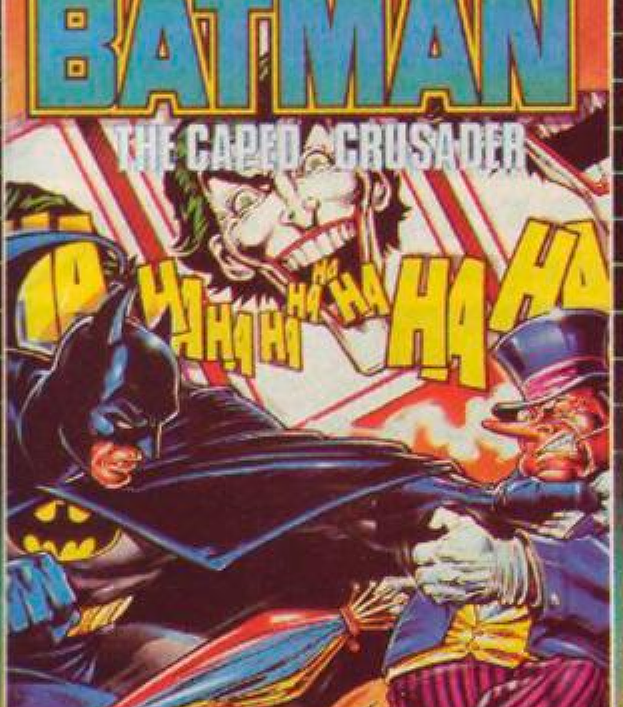


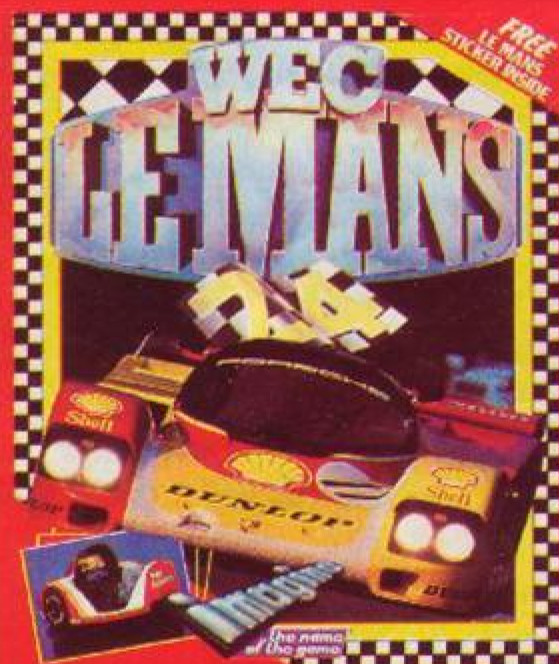


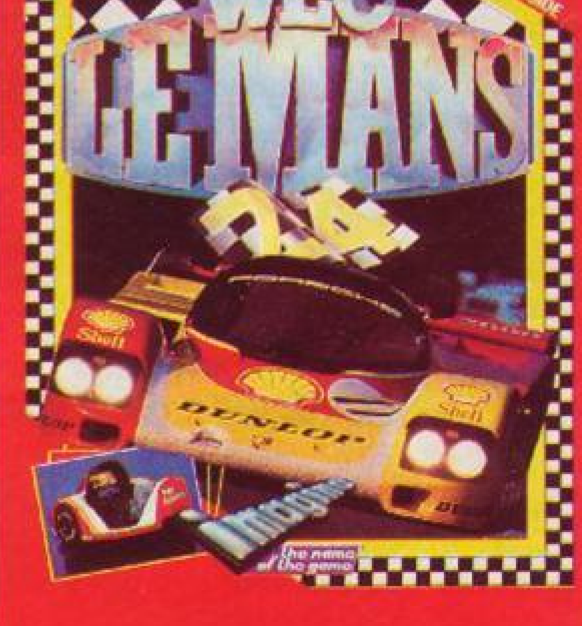


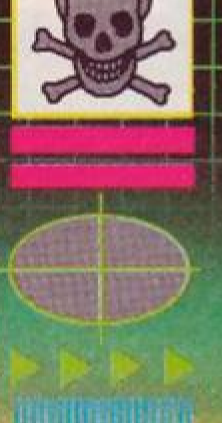






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**7 AMSCENE**
Three pages packed with CPC news and info

**11 REACTION**
Have your say – these are *your* pages! And *Sugarman* flies in for another action-packed thrilling adventure


## SERIOUS SIDE

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**15 LEARNING CAN BE FUN**
A major brand new educational release from Database

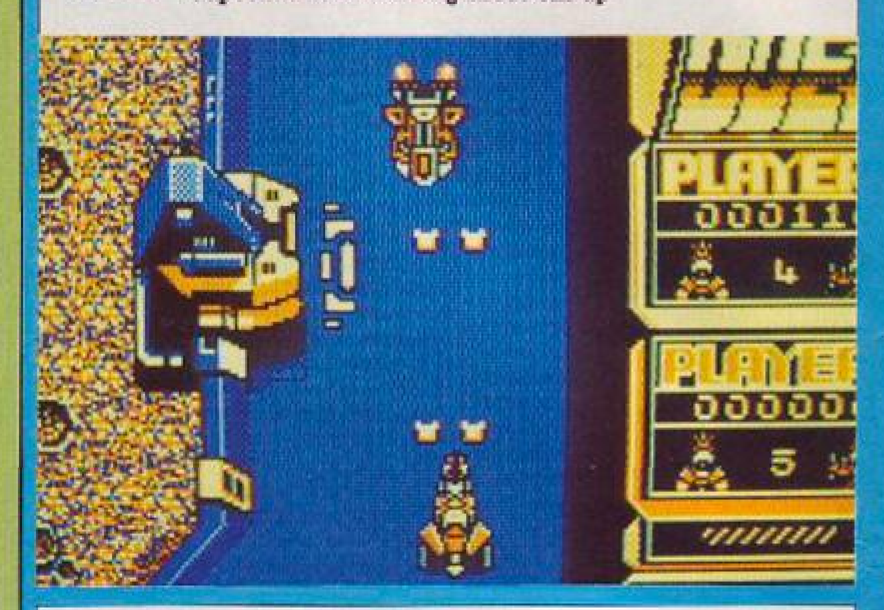



● Lucy says: 'I applaud this initiative in the educational field'

## THE ACTION BEGINS ON 35!

ALL THE TOP CPC GAMES!


**35 LAST DUEL**
Capcom's new scrolling shoot-em-up


**36 FAST FOOD**
Dizzy is back, courtesy of those nice Oliver twins






● The chap up to his eyes in disks – where *does* he get them? – on the front cover is none other than Ollie Alderton, goalkeeper extraordinaire. Ready when you are for a game, Microprose (well, it *is* for charity).


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ABC

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35,095
January – June 1988



● We grill the Fours Field crew (p.40)

## Not so sweet for Sugar

So Amstrad profits have taken a tumble for the first time ever. Panic on the Stock Exchange? Headless chicken time on Wall St? Doubt it, somehow. Sugar's been in scrapes before, and no doubt he'll bounce back from this one (if you can bounce back from a scrape).

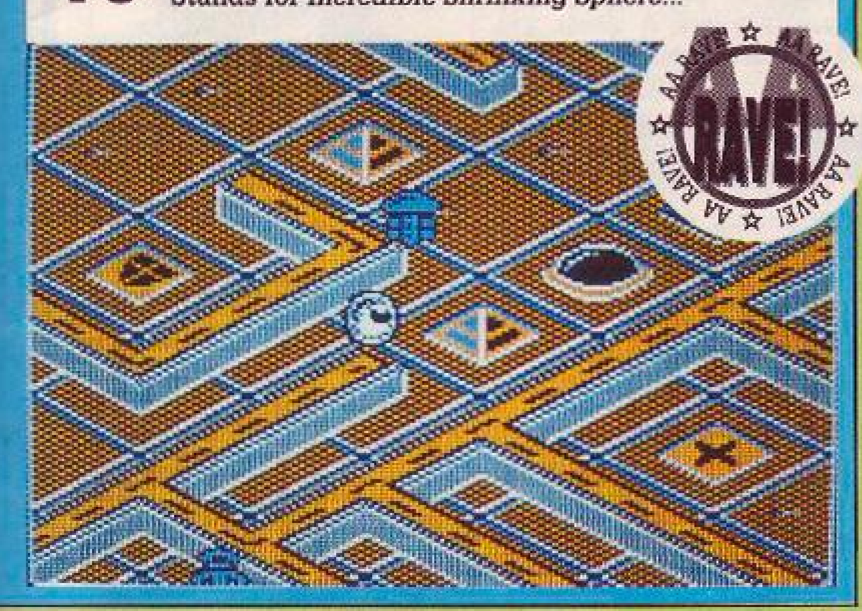
The reason I mention all this is that Sugar's hard-nosed attitude is what has kept the CPC going. He's always said he 'll continue to sell as long as the public continues to buy. It is said the CPC sold more in the six months up to Christmas '88 than in the same period in 1987. If true that's remarkable, and a cause for celebration – even at Amstrad!

Steve


**38 VINDICATORS**
Domark kick off a brand new coin-op label




**40 ISS**
Stands for *Incredible Shrinking Sphere*...




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Is the *CPC Entertainment Centre* for you?

**20 COURSES FOR HORSES**
*Form Master* will lead you to a horse

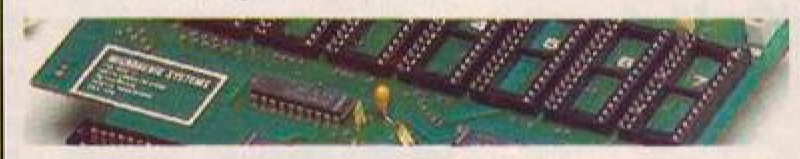
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How would you manage without Trenton to help?

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# AMSCENE

releases... updates... previews... new releases... updates... previews... new

# Not so sweet for Sugar as Amstrad shares slide

Alan Sugar's wallet took a heavy hammering when Amstrad's latest half-year figures were announced. For the first time ever a drop in profits – of around £15 million – was announced. Sugar's own shareholding was suddenly worth £57 million less as his company's share price lost £130 million.

City analysts were predicting problems for Amstrad six months ago, when Alan Sugar was announcing the Sinclair PC200 and upmarket PC2000 series. His problem, of course, was a shortage of dynamic RAMs, leading to increased prices and decreased production.

Even so, the fact that Sugar has come a cropper for the first time in his twenty years in business has upset financial houses.

Uncharacteristically Sugar's response was to agree that '88 had been a 'disastrous' year. 'We made bad mistakes,' he admitted: 'I don't really know why so many things went wrong at the same time. But come the new financial year we'll be firing on all cylinders.'



● Amstrad's Chairman: 'A disastrous year... We made some bad mistakes'

● Amstrad has come out fighting, announcing a £12 million advertising campaign to begin in the spring. A third of this sum has been allocated for national TV.

£2.4 million is going to be splashed on the PCW9512, and the cheap PCs are getting a similar figure. The remainder is to be spent on the upmarket PCs that were so nearly strangled at birth.

No mention of the CPC is made, though, in any advertising literature. A campaign is planned for the Autumn, however, *AA* was told by an Amstrad PR spokesperson.

This seems to indicate that a long-term future is planned for the CPC machines. Indeed, Amstrad's poor showing could be good news for 464, 664 and 6128 owners. There is a general feeling that no new machines are planned for 1989, and that it will be a time for concentrating on existing product.

● Not such good news on the CPC front is another deletion from the hardware catalogue. Recently the firmware manuals were let go out of print with no plans to reprint, and disks have been in short supply for some time. Now the MP1 modulator – the power supply for the 464 – has disappeared.

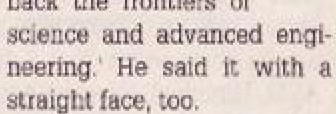
Dave Ralph of WAVE, the distribution and mail order company, reports angry letters and phone calls from customers who believe they're being had. 'But we've been told that Amstrad is "rationalising its stock,"' says Ralph, 'and won't be producing the MP1 any more.' The MP2 which now covers for the 464 costs twice as much, £30 as opposed to £15, since it also supplies disk drive power – which 464 owners won't be needing anyway!

## See you in court, Mr S!

Cranfield Institute of Technology has appointed the Chairman of Amstrad a member of their Court. There are over 300 members, who make statutes for the university and also appoint the Chancellor.

They are mostly individuals from various industrial organisations and local authorities. (Some are even from universities!)

Sugar offered an interesting statement after he'd been initiated: 'Like Amstrad,' he said, 'Cranfield is a leading technology organisation pushing back the frontiers of science and advanced engineering.' He said it with a straight face, too.



● Sugar: Cranfield appointment

## Domark blush as Bob moves House

Oh dear. Poor old Domark have been put in the unfortunate position of issuing a press release to announce the cancellation of *Bob's Full House*.

The licence to the programme had been acquired at considerable expense, and the game was at an advanced state of development, when Bob Monkhouse (such a *nice* man, don't you think, not like that rude Bill Elton) ups and leaves Auntie Beeb for an even grosser packet at ITV. Result: consternation, as Domark discover they have no right to his name or personality.

## Ozzie stick comes up trumps

A new joystick is hardly earth-shattering news. But the Star Cursor is not just any joystick.

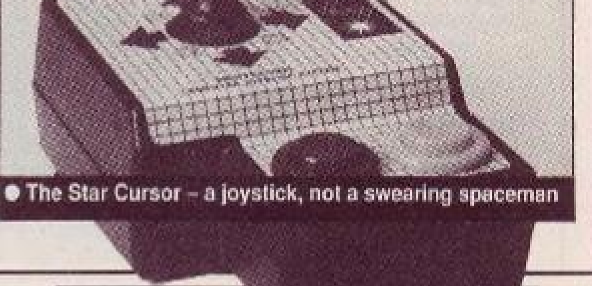
It's a home version of those wonderful arcade sticks we've all spent so much money on. It's already been released in Australia, where men are men and joysticks better be up to scratch or they're out on their shafts before you can say Crocodile Dundee.

'It was voted the Best Joystick in the Universe by one Australian magazine,' said Mark Paulo of Microleisure, who produce the stick: 'and others have also been very enthusiastic. I have high hopes for it in Britain.'

*AA* gamestester Trenton Webb was among the first in Europe to get a hands-on test of the Star Cursor, and he pronounced himself well pleased with its performance. The Star Cursor is £18.99 (p&p included if you mention *AA*) from Microleisure (☎ 041 221 8944).

● Look out for quite possibly the most extensive joystick survey ever conducted – coming soon in your super soaraway *AA*!





● The Star Cursor – a joystick, not a swearing spaceman




## Cloughie hit's out again

It's nothing to do with Cloughie's recent controversial attempt to take the law – and the fans – into his own hands. How cynical of you to even think so. No, it just so happens that CDS software are re-releasing *Brian Clough's Football Fortunes*. 'Take your hands out of your pockets, yoong man' was all Cloughie would say to *AA*. No he didn't, we made that bit up.

*BCFF* has you making decisions about team make-play, which players to buy and sell – all the usual strategy stuff. The difference is that it is played on a board, as well as on a computer, with decks of cards, counters, and fake money. Sales figures are claimed to be over 80,000: CDS hope to push this up to 100,000. We're sure that anything to do with Mr Clough will be a Big Hit.

# Spring in the air as Masters drop 'em!

Spring in the air, m'lud. - No, you misunderstand, I mean it *is* spring, when software houses' thoughts turn to money, and matters rude raise their pretty heads. Here's your proof...

● EXHIBIT 1, m'lud.

Codemasters, frequently and justly lampooned for some of the most awful press photos it has ever been a news editor's misfortune to write copy for, have dropped their photographic standards. Who'd think yesterday's champions of twee snapshots of wee William would sink to scantily dressed women?

We feel very sorry indeed for these two young ladies: not only are they too poor to afford dresses, but they've been reduced to leaning on young Codemasters programmers for support. It's all to publicise, er... what is it to publicise?

Ah yes, the two guys in the middle - you had noticed them, of course? - are indeed programmers. Gorgeous pouting 19 year old Peter Williamson (36, 36, 36) (left), doing a stint at Edinburgh University (bet this picture goes down a storm with Feminist Soc.), is responsible for *Super Stunt Man* (never *AA* rated) and *4 Soccer Simulators* (much better at 81%). He's now working on *Motorcross Simulator*.


● Exhibit 1: Masters bait the moral majority

The programmer on the right didn't and isn't.

● EXHIBIT 2, your honour.

Examine closely, if you will, the accompanying poster for Palace's *Barbarian II*. (The preview shots suggest that the graphics are well up to the high standard of the original (an 87% Rave in AA23): look out for the review in AA coming soon.)

● EXHIBIT 3, officer.

And finally there's Coktel Vision's *Emmanuelle*, which is nothing to do with Christmas and everything to do with a long and dishonorable tradition of tarted up trash. Still, *we don't* want to prejudge the issue, your honour, and get court out. Review soon.


● Exhibit 2: Palace's *Barbarian II* – Maria Whittaker is on the right

## AA welcomes newcomers

Welcome, ladies and gentlemen, a new fanzine specifically devoted to the CPC. *AEM*, standing for *Amstrad Enthusiast's Magazine*, is aimed away from games players and more at the serious type. If it takes off the authors hope to start a Public Domain software library. Issue one costs 90p: more details from editor Neil Selwyn, AEM, Highfield, Coombe Keynes, Near Wareham, Dorset, BH20 5PS ☎ 0929 463208.

Neil issued this heartfelt plea to all *AA* readers: 'We desperately need anyone selling home-brew software to send us a copy to review, and we will definitely include it in a future issue. I feel that as time progresses home-brew will become mo[re] and more important a[nd] hopefully producers o[f] can promote their so[ft]ware through the pag[es] of *AEM*.'

We are of course n[ot] in the least influenced [by] the praise heaped on o[ur] blushing heads in t[he] first issue.

● And John de Rivaz is starting a newsletter aimed at programmers interested in fractals, those wonderful graphics shapes that can be magnified, and are composed of smaller variations of the original shape. They're used quite a lot in computer graphics, because of their basis in mathematics – computers can work out how to draw them.

People interested in this deeply fascinating topic should contact Mr. Rivaz at West Towan House, Porthtowan, Truro, Cornwall TR4 8AX. Number one is free, with a charge being made for further issues. If you contribute an article used in a newsletter, the next five issues come free to you.


● Paul Hopkinson and Neil Selwyn, most of the staff of *AEM*, and their first issue – out now!

## The great CPC cover-up

You don't think it could be a subconscious reaction to current fears about health threats, do you? We don't want to read anything very deep and Freudian into this, but it does seem a little odd that two separate CPC cover-up jobs should be getting pushed at the moment.

Make your own mind up. First of all there's Kador's £8.95 *Seal'n Type*, designed for the kind of dope who would place a coffee mug near enough to his or her keyboard to threaten it with drowning. Who could be so daftt? (Tthat tt key's still stticking, Patt. Mustt be tthatt coffee I spiltt on itt.) Kador ☎ 0443 740281

● *Seal'n Type*, for the kind of mug who'd spill coffee on a keyboard

And Action Computer Supplies proudly present Praybourne dust-covers. Rather than fitting snugly around your computer's contours in traditional fashion, they drape loosely over in a very elegant, relaxed kind of a way. Your CPC will be expecting candlelit dinners next. These jolly swish covers are also flame retardant, anti-static and hard wearing. Action even make them to order. Prices from £12 to £50. Contact Action on ☎ 0800 333 333.


● ... and the Praybourne dustcover. Treat your computer, why don't you?

# Forgive them their sims

Codemasters are unleashing a positive rash of software, a blend of very original and downright repetitive titles. *Rock Star (Ate My Hamster)*, on Gold label (sounds like coffee, means 'full price') is similar to *Football Manager*, but has you guiding a rock band from riffs to riches. Starting at the bottom (oo-er) you aim for five platinum singles in one year (Sorry Kylie, they must have different words and music!) before you go bankrupt.

The game is backed by different music for every group that actually gets better the more your band practice. *Rock Star* is full of music biz caricatures, scandal and hype, with publicity reported in a mock up of a certain daily news comic bearing the headline ROCK STAR ATE MY... (the rest is up to you!)

Also announced are two sequels: the Olivers' *Grand Prix II*, and *Street Gang Soccer*, a spin off from *Four Soccer Sims*. But not a new 'simulator' in sight, what's happening to the world?




● David Darling making a prat of himself in aid of *Rock Star*, which may (or may not) need it

## Bombs away!

We can all sleep safely in our beds, you'll be delighted to hear: protect and survive is a thing of the past. Activision's *SDI* has arrived, and under the protection of a 'space shield' we'll be reviewing it in full next month, with the help of a very special guest, an expert on the subject who's not long retired...




● Coming soon – with a bang, we hope, rather than a whimper

## Arnold lands on Arnold

With two of his movies licenced simultaneously by different software houses, Arnie Schwarzenegger may soon be as popular on the small screen as he is on the big one. Ocean plan *Red Heat*, in which our hero plays a soviet detective tracking his quarry to America. Meanwhile Grandslam's game of the film of the book *The Running Man* has Arnie pursued for sport in a TV game show. Grandslam have adhered to the plot rigidly, they claim, since its script is 'the perfect storyboard for a compelling home computer game.'

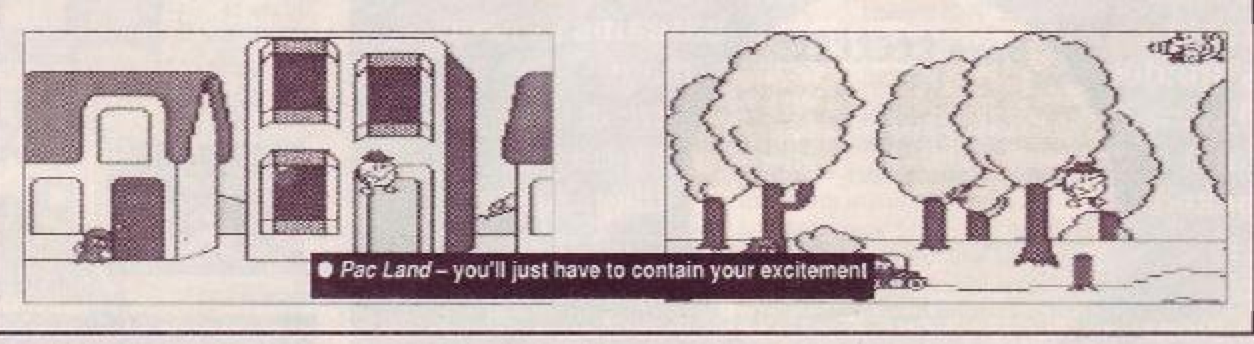


● 'Arnie and Friend in Lycra Romper Suits Three Sizes Too Small (Simulator)'

## Pacman's back! (part 93)

Remember *Pac Man?* Little round guy with a maze fixation? Well, he's back out of retirement again. Grandslam's *Pac Land* – viewed from the side rather than above – has the spritely little bundle running about, leaping obstacles, avoiding oncoming ghost-driven traffic and in the interim munching heaps of fruit.

Pac Man's twee mission, to rescue a fairy and to lead her back to Fairyland, takes him across deserts, over mountains, and through towns in search of the fairy and her magic boots. But nasties Blinky, Inky, Pinky and Clyde are out to put a stop to Pac. Can you wait? I know I can. Review coming up.



● *Pac Land* – you'll just have to contain your excitement

# Two tribes go to war

Microprose and Electronic Arts, two of *AA*'s very favourite software houses, went down to the woods to play together – armed with Splat Master pistols and pump action carbines. They then proceeded to blow each other away in a mad orgy of violence.

Luckily they were only shooting paint pellets at each other. The woods in question, you see, are the HQ of the Combat Game just off the M42.

Microprose's spokesman Martin Moth was modest in victory: 'I don't really know why we won. They just didn't have the instinct like we did. We were just so good – gung ho and ready to kill. We employed nice flanking manoeuvres and sharpshooting to the best effect. Of course, we've been using *Airborne Ranger* to practice tactics. It's a brilliant combat simulation from Microprose, available now at £14.95 tape and £19.95 from all good –' OK Moth gerroff.

For EA, production technician and leader for the game Rupert Eastbrook was ready with a convincing explanation for the humiliation: 'Yes, we lost. We just went for it, every game. There were six more of them than us, and for every one of us they took out, we got one of theirs. At least we had fun though.

'Really it all came down to numbers. They were more militarized, they knew each other better. We didn't know all of our programmers, so we lost out. At least we had fun – a rematch is probably on the books, and they can't really turn us down. There'll certainly be more matches in the software industry.'

Besides, as EA's Lesley Mansford quietly pointed out, where it really matters EA have the upper hand. *Chuck Yeager's Advanced Flight Trainer* was last month's *Mastergame*, and *Airborne Ranger* wasn't. So there.

● The mean-looking Microprose crew: ate EA alive with the assistance of *Airborne Ranger*, claims Martin Moth

# The weekly...

The trouble with trying to write an ad for New Computer Express is there are so many good reasons to buy it you don't know which to mention first.

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**Don Howard, Croxley Green, Herts**

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"Yours is by far the best weekly computer magazine on the market."
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# ...that's taken computer users by storm

# REACTION

## Once again the Ed rips open a cascade of your correspondence

Dear readers,
Here goes again, as your ed – no, that's *not* me at the top of the page! – faces another three pages of your letters on everything under the CPC sun.

These are *your* pages. And there's a £15 SOFTWARE VOUCHER for one lucky winner every month too! Put pen or printer to paper, please, and post it off pronto to: *Reaction, AA*, 4 Queen St, Bath BA1 1EJ. But we're terribly sorry, we really are too busy to reply personally, so no SAEs *please*.

Steve
*AA*

PS By the way, all mail order and subscription enquiries should be addressed to: *Special Offers, Amstrad Action*, The Old Barn, Somerton, Somerset TA11 7PY. We can do no more than pass letters on to them.

### Competition goes under

Well, the sun's shining and people in New Zealand are lounging around on our beautiful beaches (having a nice winter?).

No nuclear weapons, more sheep then you could ever imagine, and my *AA*37 birthday edition. Ahh... Paradise!

But what is this, a *Dragonlance* competition! Glory be, and I know the answers too!

But despair, despair. At the page bottom it says 'Competition closes on 31st October'.

This can't be. Here in New Zealand I received my *AA*37 (glad to see you got the number right) on the 15th December.

As you can see, it is entirely impossible for myself and any other New Zealander to enter your competitions. We pay $8.00 (almost £3) for your magazine and expect a full magazine which entitles us to all privileges.

£15

How many other overseas readers have the same dilemma? Shall we form a conspiracy? All we want is an occasional competition designed for overseas readers. One with a long due time.

**Shane Morgan**
**Auckland**

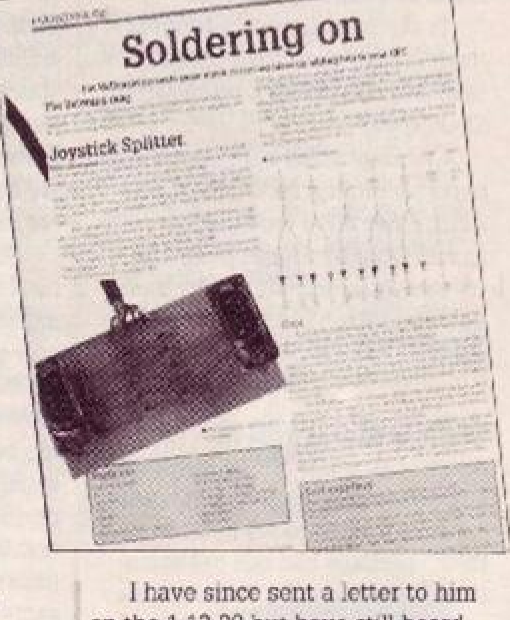
PS Were the answers as follows?
1 Krynn
2 St George
3 Smaug
4 Chinese New Year. The start of the Year of the Dragon

Heroes of the Lance
- US Gold's great smash and grab!

*AA: First the good news, Shane: you got the answers right. Second the bad news. It is unfortunate, we all of us agree, that our much-loved overseas readers can't join in the competitions, but the truth is that we wouldn't get very many entries from people if we said, 'Oh by the way, it's open for four months, so you won't get your prize even if you win for at least five or six months.' Still, we're bearing it in mind and we hope to be able to do an overseas competition before too long. In the meantime we're sending you a £15 software voucher as a consolation prize. Howzat?*

*Oh and one last thing. Any more cracks out of you about our British weather (which has been great, at least in England), or the ed's inability to get his issue numbers right and we'll send Pat out to fix your CPC for you. That'll keep you quiet!*





### They don't call him splitter for nothing

On the 10th of October last year I sent off to Geoff Shakespear for a ready built joystick splitter as advertised on page 16 of your June '88 magazine. I enclosed a cheque for £6.95.

Since then I have heard nothing from him but have noticed that he cashed the cheque on the 25.10.88.

I have since sent a letter to him on the 1.12.88 but have still heard nothing since. I am still waiting anxiously - please help!

**A. J. Gush**
**Lydney**

*AA: Unfortunately, Mr Gush, there's very little we can do. We have written to Mr Shakespear – he's not on the 'phone – on your behalf and the several other readers who've written with the same complaint, but as you've found he's*

### Bard's tall tale

I am writing to answer the competition which you didn't print. The competition was to spot the deliberate error in *AA*40.

The prize was a year's subscription to *Amstrad Action*, 10 free games of your own choice, and a copy of *The Bard's Tale* on disk. The answer is on page 47. The three pictures have the wrong labels. Since I am the only entry, I have won the competition. I will settle for *The Bard's Tale* on disk (aren't I nice?) Please send it to my address which is at the start of the letter.

**David Barr**
**Hamilton**




*AA: (Better think quickly lads. Try this one, Excuse No 384B _ never fails...) How did you know about that competition, David? We were saving that up for the 100th issue of AA. You know, 'Back in AA40 we printed a deliberate mistake. What was it?' Now you've gone and blown the secret. Still, if you write to us when AA100 comes out, we'll send you your prize – which may not be exactly what you expect...*

*not very keen on keeping up his correspondence. If by any chance you're out there, Mr Shakespear, we've a message for you: supply the goods you've cashed cheques for, or face the consequences. If, however, there's been a genuine misunderstanding or confusion we'd appreciate it if you'd get in touch and explain yourself.*

*In the meantime, we suggest readers save their hard-earned cash and don't send it off to Mr Shakespear.*

*One final small but nonetheless important thing, Mr Gush: it wasn't an advert. We received no money from Mr Shakespear, and we simply informed readers that he was making the service available.*

## Bugs and features

As you can see from the attached letter, Ocean have not even bothered to respond to my letter to them: perhaps you can get something out of them? The games they sell are among the most expensive, yet in my experience they are the only software house whose products are often bugged.

In a moment of madness, I recently purchased their *Magnificent 7* disk – someone told me that the version of *Arkanoid* on it was different and did not suffer from the bugs of the original version. The games on the disk do not have loading screens, and in general the whole thing is a cheap and nasty package. Yes, I know it's also cheaper than the originals, but the whole point of such a competition is that it is cheaper, i.e. you get better value for your money.

I think it's time that people like Ocean were taken to task in your pages. It worries me when you consistently give them *Raves* (*Arkanoid 2*, *AA32*) while blithely admitting that the game is badly bugged. Richard Monteiro says that the bug 'ruins an otherwise perfect game.' My contention is that this and other bugs do indeed ruin the game, and that therefore you should not be giving them *Ravesreviews* – you should say something like, 'this game could have been really terrific, but unfortunately is badly bugged, so we can't recommend it to our readers,' and give it 0% rating.

Sorry to go on at such length, but I am really hacked off at spending so much money on these things, only to find that they have been carelessly thrown together and released to the public without having been tested. I for one will not be satisfied with less than a complete refund from Ocean, for *Arkanoid* and *Wizball* (tape) and *Mag. 7* (disk). I hope you see things the same way as I do.

**Roger Fenton**
**London**




*Mr Fenton's letter to Ocean:*
'I recently bought copies of *Arkanoid* and *Wizball* for the Amstrad CPC 6128. I am having great difficulty in playing the games. Either I am very much mistaken, or both suffer from serious "bugs."

'1 *Arkanoid*. The main problem with this one is the levels (No. 3 onwards) which contain large numbers of orange (indestructable) bricks. It is quite common for the 'ball' to get trapped in a 'loop' within the confines of these bricks, and in fact I have never managed to get beyond Level 9, solely because of this. It is more often than not the case that all one's lives are lost at Level 3. The reason for this is either (1) the ball gets trapped in a loop, or (2) The ball becomes completely unpredictable and moves much faster than the capability of the bat after it has hit enough of the orange squares. When this happens, it behaves in a somewhat random fashion, often becoming impotent as regards the destruction of any bricks whatsoever.

'These are merely the most serious of the flaws, rather than the only ones. It would appear that I am not the only one to have noticed these faults: I recently saw them mentioned in a review of *Revenge of Doh*. If only there were even a method of escaping from a frame when trapped in a loop, with that life still intact. The worst of it is, this would be a really excellent game otherwise (as most of yours are). As it is, it is quite useless.2 *Wizball*. I have played this game on an Atari ST. Obviously it would be too much to expect that it would be comparable on an 8-bit job - however on the former it is possible for a 2nd player to control the Cat: this makes the game infinitely more playable. A serious omission I suggest.

'As will be obvious, I am really disappointed at the performance of these rather expensive games - not just because of the wasted money, but also because I really would like to play them! If there is something crucial to the successful playing of the games which I have somehow missed, I would be grateful if you would let me know. If I am correct, I would appreciate a refund, as I do not feel the games are playable in their existing form.'

**R J Fenton**
**London**

*AA: What Richard Monteiro said, in fact, was that 'the ball occasionally gets stuck which ruins an otherwise perfect game.' Gary Barrett did say there were 'irritating bugs... The ball sometimes gets trapped between indistructible blocks and since there's no way to quit the screen or even the game, you can end up having to re-load the game.'*



● David Ward, Ocean boss: little sympathy for Roger Fenton

*We faxed a copy of your letters through to Ocean, Mr Fenton, and David Ward, who founded the company and is its Chairman, had this to say: 'As you know* Wizball *was an AA Mastergame, scoring 92% (AA25), and* Arkanoid *was an AA Rave, with 89% (AA22). We've sold both these games in large numbers and no-one's ever complained before. As for* Magnificent Seven, *it's absolutely terrific value and I'm surprised that Mr Fenton should complain about being able to buy so many games so cheaply.*

*'There's always been a problem for games writers in getting the level of difficulty just right. What's too easy for some is too hard for others, and so on.*

*'What I'm wondering, though, is why this gentleman – who seems to know what he's talking about – is complaining about two generally well received games that are in fact over two years old.'*

*I wouldn't hold your breath for your refund, Mr Fenton.*

## Extraneous?!

Your review in *AA40* of *The Games – Winter Edition* say that the game lets you choose your country/nationalities from a choice of seventeen countries ranging from Austria to West Germany via Japan (?) and Mexico(!).'

Why is there a '?' after Japan and a '!' after Mexico? In the '87-'88 season a Japanese slalom skier finished joint eleventh in slalom overall (42 points). His name is Totsuya Okalse, and the World Cup skiing calendar finishes with two meetings in Japan!

As for Mexico, at the 1988 Winter Olympics they won the coveted title 'hot country champions' in the bobsleigh event (4 men). Although not an official title they still won it!

**Alex Trainer**
**Ely**

*AA: The reason? Sheer ignorance, I'm afraid Alex, sheer ignorance!*



## ●Acid test and a root for Toot

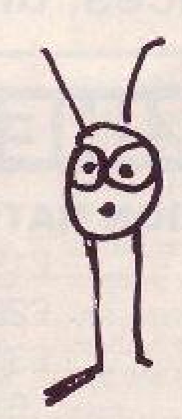
Two points. Firstly on the Christmas Cassette (well worth the extra 25p!!) the rocks on *Isotopes*, the highly addictive game, are, after close scrutiny, Acid men cunningly disguised in a bluey-grey colour.

Secondly, I missed about 13 issues, and when I was able to buy it again, to my horror I found a hole in the mag!! (not a real one!). Toot was missing! (the thing at the bottom of the page!) Please bring him back as he make your mag even better.

**David Todd (age 12)**
**Harwich**

*AA: Jeremy Fox-Geen, who wrote the excellent* Isotopes *game, would only comment: 'Aciieeedddd!' (He didn't really, we made that bit up.) – He is, you will note, a Jeremy and not a Sid (geddit).*

*Toot, as regular readers will remember, has become a millionaire recluse in a secret mountain hideaway, but he did agree to make a guest appearance for David's letter.*



## ●Mission impossible?

I've noticed some strange things about Microprose's *Airborne Ranger* (disk). For those readers who haven't yet seen the game, your aim is to carry out one of the twelve missions available, moving a character around the playing area shooting and destroying things on the way.

'No, this is not an arcade game!' as the field manual insists, 'but a combat simulation.'

There are two missions I draw your attention to, the 'Delayed Sabotage' and the 'Liberate a POW Camp' missions. The briefing for the former tells you you can only set time bombs to detonate at midnight for this mission. But either there is something wrong with the program or the book is telling a little untruth, because if you place a time bomb outside the fuel dump (your objective) you can set five, 10 and 15 second fuses. And any set after that one will be normal time bombs as well.

Secondly, the second mission I mention is also a trifle misleading. The mission is to free the prisoners from a tiger pit by flicking a switch on a control panel after blowing it up. 'Well,' I thought as I reached the prisoners, 'a time bomb should do the job. But no! How stupid of me to assume that, of course the control panel completely disintegrated, thereby ending the mission unsuccessfully!

Although I think Microprose should thoroughly test every aspect of their games before printing an accompanying manual, I still believe this great game will be among this year's honours. It's a very impressive piece of software: well done Microprose!

**Simon Barker**
**Gravesend**

*AA: Microprose were very interested to hear of your letter, Mr Barker, so we asked their PR Manager Martin Moth to reply:*

*'First of all, many thanks for the compliments concerning* Airborne Ranger, *they are very much appreciated. Now as I have the opportunity to reply, I'll try and answer the points in your letter.*

*'Firstly, concerning the time bomb in the Delayed Sabotage Mission, I'm afraid that you are correct and the time bomb that should explode at midnight does, in fact, go off with the usual 5/10/15 second delay. This does differ from the information given in the manual, but luckily does not effect the gameplay in any way.*

*Secondly, in order to liberate the prisoners from a POW Camp, you need to have done a bit of detective work. If you try and blow up a concrete pill box with a grenade, you'll find it won't work, whereas a time-bomb will. From this you can deduce that the grenade is less powerful. So, by grenading the control panel you will not destroy the switch, thereby enabling you to flick the switch and free the POWs.*

*I hope this answers your questions satisfactorily and best of luck with future Microprose simulations.'*

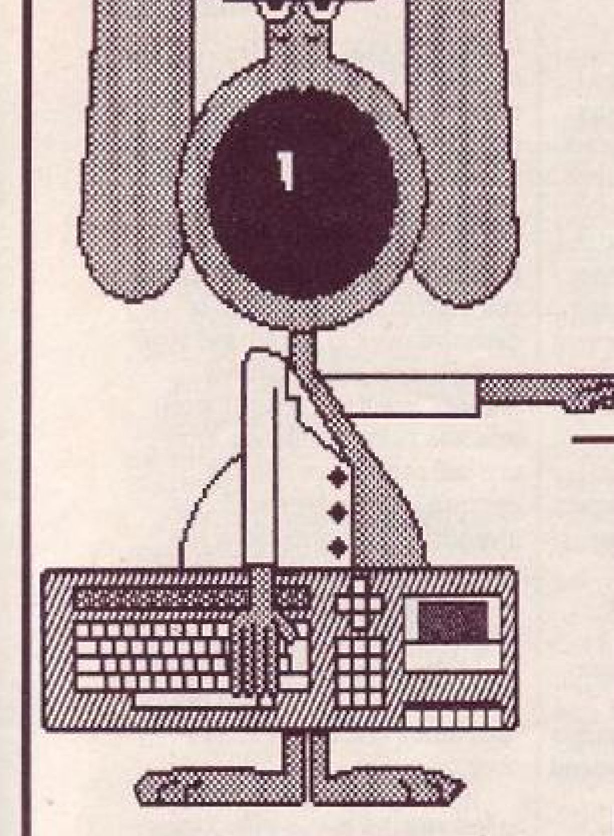
*What a pleasant reply, Mr Moth. Pity the Future Five-A-Side soccer team's ready and waiting for you lot (well it is for charity)...*




● *Airborne Ranger:* are these missions too tough even for him?

## Sugarman





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# Boys and girls come in to play

**Is it a bird? Is it a plane? No, it's an educational package for the CPC! STEVE CAREY sees a pig fly past the window...**

It has long been a standard complaint that the CPC does not have the educational software it deserves. We here at *AA* have lost count of the number of times we've reluctantly had to disillusion parents with new Amstrads eager to make the most of 'all this excellent educational material that nice man in the shop told us about'.

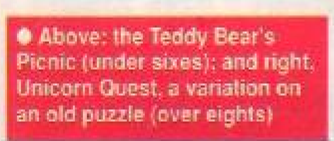
With such a well earned reputation as a machine that straddles the daft serious/games divide, it is only in this crucial area that it is lacking to make it the complete, all-round machine. Indeed, had the software been there the CPC would have made an ideal schools machine: instead, that important opportunity to 'get 'em young' has been grasped firmly by the Beeb and the Nimbus.

What we don't need, though, is yet another false start, another badly researched, badly presented, home brew program masquerading as 'educational' and suiting that label only in the sense that it teaches you to be more careful next time. It's not that there haven't been good releases: Arc and Bourne, to name but two, have given the world good things and continue to supply them. But in general the CPC has not been well served in this department.



## Cross-eyed frog

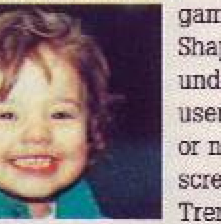
A warm, if an initially cautious, welcome, then, for Database's major new educational package – which is in fact three packages, since *Fun School II* covers three main age groups: below six; six to eight, and over eight (what, *everyone* over the age of eight years old?). You can tell it's a major launch by the lavish, brightly-coloured packaging: a pencil-equipped teddy for the very young, a satchel wielding cross-eyed frog for the middle group and a more sophisticated image of a robot well stocked with shiny hardware for the grown-up over eights.



● Above: the Teddy Bear's Picnic (under sixes); and right, Unicorn Quest, a variation on an old puzzle (over eights)

Under sixes face a heart-rending choice on the robust large lettered menu between Shape Snap; Find The Mole; Teddy Count; Write A Letter; Colour Train; Pick A Letter; Spell A Word and the Teddy Bear Picnic. Keys are sensible, and on some programs whoever is supervising has a useful 'hidden' difficulty control.

Rather than describe each game in detail – we could be here all day – let's stick to one game per age group. Shape Snap for the under sixes asks the user to say whether or not two shapes on screen are identical. Trenton's two-and-three-quarter year old niece Naomi Jenkins was taken through the menu by her mum Tracey and, while she's not yet ready for the keyboard, she loved this shapes game – as well as the Teddy Bear's Picnic (a very simple maze), which she confidently showed the way through with her finger. In general she enjoyed the music and the pictures, and it seems likely she will continue to get more from it as she grows older. 'It's terrific', Naomi's mum said: 'it's a healthy, fun way of learning. Rather than just looking at the letters she actually gets to do something with them. I like it!'



● Naomi loved it!

## Hopping for the best

The middle age range find themselves tearfully having to decide whether they want to play Number Train; Shopping; Maths Maze; Treasure Hunt; Bounce; Packing; Caterpillar or Number Jump – this last a novel way to encourage your youngster to do multiplication without knowing it – and it sure beats chanting your tables in the classroom!

Finally the over eights – who could be insulted by the loading tune 'Boys and Girls Come Out to Play' (on all modules) – fight over Build a bridge; Guardian passage; Logic doors; Souvenirs; Code boxes; Mystery machine; Escape and Unicorn Quest – a version of that old chestnut about carrying three mutually incompatible objects across a bridge. This time it's through a wood, and you have to keep the peace with a bird, an apple and a worm.

Measuring the education element isn't as easy as assessing its entertainment value, but my guess is that *Fun School II* lives up to both parts of its title. It is fun, and your child will almost certainly learn too. The inclusion of a difficulty level option is a smart move, and unless your child is exceptionally bright the stated age range should be suitable. The upper age range I'd put at about twelve, and the lower – if Naomi is anything to go by – about three. All those lucky people in between are in for something of a treat. ●



## Teecha is a CPC!

**We're working on an educational special to appear in a future issue, and want to know how many schools have CPCs installed. Do you know of – or even better, go to – a school that possesses a CPC? If so write and tell us, including your own name, address and if possible a day-time 'phone number; the name of the school and the headmaster; and any other information you think we should know about. Come on now, do something for the CPC that's done so much for you! Write to *Education Special, Amstrad Action*, 4 Queen St, Bath BA1 1EJ.**

**We'd also like to hear about any educational software you've found particularly good, or any unusual educational application involving a CPC.**

## FUN SCHOOL II

**£9.95 tape, £12.95 disk**
**Database ☎ 0625 878888**

**GOOD NEWS**
- Bright, well presented.
- Jolly good fun.

**BAD NEWS**
- Inevitably limited variety.
- Over eights might feel patronised.



# File and forget!

Keeping track of disk programs is a real pain. It's so easy to save things onto them without keeping account. 'After four years,' boasts PAT McDONALD, 'I must have over 1,000 files.' OK big mouth, we said: get them sorted.

Greyhound's *Discbase* is a highly specialised database, for just one task: keeping track of your floppy disk collection and the files on them. You input all of your disks and the program asks you for the name of the database. Only three characters are used, but it would take a very large collection indeed to need more than two databases.

The disk needs a number and a 'descriptor' (translation: name). The name – up to a generous twenty characters – can be saved onto the disk. All those obscure names you've been scribbling on disks all these years can be organized into the new system, and it doesn't matter if the disk label falls off, because if you want them to be, they're recorded onto the disk. (Note: although each disk has two sides, one can get terminally damaged, so the program works in sides rather than numbers of disks.)

When you have done all your inputting you have a long list of files, which disk they're on, length and so on. Now at the press of a cursor key you can discover which sides have been input and their contents. Deleting and updating disks which have changed contents is simple.

### Everyday use

Using the **View** option you can see (a) which sides have been recorded, and (b) their contents. And you can see, and print out, the files selected by a **search**.

There are two searches, simple and complex. A simple search to list all files containing the keyword LETT' took half a second to find 11 files out of 447.

The complex search is even better. The **Forced** option deselects the selected files from previous searches; **Or** adds to those already selected; **And** deselects files which do not fit every search condition from every search. This is very helpful indeed. I can now get a list of where every piece of work I've ever done for *AA* is, and on which disk.

A number of additional onscreen features take only one or two keypresses. All are friendly, and a confirmation is demanded for dangerous moves.

● Easy to get into

● It's so easy to use

There are options to:

- **catalog** the disk present in the drive;
- **change** ink colours (saved with each database: you could have your boat collection in blue and green, and your book collection in black and white);
- **return** to Basic, and finally to
- **use** disk utilities (deleting, renaming) for erasing, loading or saving the database.

It's not only the usefulness of this product that has bowled me over. Its simplicity and speed are brilliant. 99% of disk users will find *Discbase* indispensable. I'm not sending the review copy back until my work collection has had the *Discbase* treatment too. ●

| DISCBASE | £8.95 disk only (includes p&p) Greyhound Software ☎ 0246 235233 |
|---|---|

| GOOD NEWS | BAD NEWS |
|---|---|
| ■ Friendly and extremely useful. ■ Modestly priced. | ■ Poor presentation and manual. |

## Alternative software

Back in AA40 there was a program on the cover tape called *Disk Library System*. It's excellent for a reader's program, but *Discbase* offers superior speed and capacity. If you need to use such a program often, *Discbase* wins hands down.

By the way, Greyhound call it a disc and we call it a disk. No serious letters on the subject, please.

## A dog's life

Father and son Tony and Ian Carter went into business specifically to market Discbase (no relation to Greyhound Marketing Ltd, by the way).

'The gestation period for the package has been a long one,' Tony said. 'Over two years ago, the frustration of not knowing what was on our disks reached crisis point. We knew we could do better than the programs available at that time.

'Ian has designed the operation of the program, and written all the special routines for the data storage and displays, the searches and the update. I didn't do so much, just discussing with Ian what the program should do, and the Basic for the menu displays and similar odds and ends. Oh, and the instructions are mine as well.'

Tony is a further education lecturer, teaching physics and computer studies. Ian, Tony's eldest son, is at college. (Stuart, Ian's brother, took and processed the phot, and said we could use it only on condition we mentioned him. Smart boy, he'll go far!)



● Tony and Ian Carter, the team behind *Discbase*

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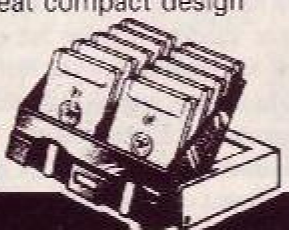
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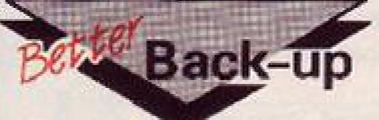
## 24HR ORDER HOTLINE (0509) 610444



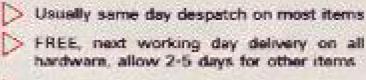

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# Big deal?

**The *Home Entertainment Centre:* you may need to hire a haulage firm. PAT McDONALD puts his back into it – and comes up with an alternative, too**

● TV TUNER: Converts a signal taken from a TV aerial into a picture displayable on the CPC screen. The picture quality is very good, although with the loudspeaker mounted in the *bottom* of the case, sound quality is not.

● CLOCK RADIO: Receives conventional radio transmissions, including FM. One problem: you can't listen to the radio while using your CPC because of the radio interference that computers generate, which drowns out even [illegible] Jameson (do we mean [illegible] We [illegible] do). You could always screen the computer, preventing the emissions. [illegible] Amstrad [illegible] it.

● AMSTRAD JY2 JOYSTICK: [illegible] JY2s can have another [illegible] for two player games – see the box. But you'll soon buy an alternative.

● CPC: [illegible] the machine you know and love – see the 'Very refined' box.

● SOFTWARE BUNDLE: For board games fanatics there's *Monopoly, Trivial Pursuit, Cluedo* etc. *Roland on the Ropes, In the Caves* and *[illegible] Attack* have been thrown in to try to satisfy the arcade people, and they're not up to it. The 11 other titles are of variable quality (ranging from less than brilliant to rotten).

● COMPUTER DESK: underrated if you've never had one. Well styled and sturdy, it's an [illegible] special, composed of six pieces of wood screwed together. The desk gives plenty of workroom and is quite tall – I loathe having to crouch down to computers. (See also box below, 'Weighty decision'.)

There's no doubt about it. The CPC is the computer with the widest appeal No other machine offers uses ranging from games playing through education to small business.

Alan Sugar has noticed, however, that the price of the CPC is, ever so, ever so, just a little, tiny, tiny bit (not that we'd want to make too much of it) above the rest of the eight bit market. Rather than drop the CPC down to this low level, however, Al has instead embarked on bundling the machine with some extra bits and pieces and actually *upped* the price.

There is something to be said for this: given the relative quality of the CPC (built in tape or disk drive, monitor, stereo sound option) perhaps it would be counterproductive to compete against inferior machines. And why should he cut prices, he must be asking, when it's selling so well. But just what do you get for the extra cash?

### To buy or not to buy?

It looks like any other marketing deal, a few odds and ends knocked together for quick bucks. But thought has gone into it: the real targets are parents who want a computer for their children that can perform well at many tasks.

You need not buy a CPC as part of the Home Entertainment Centre. Various outlets – Comet among them – sell just the computer and monitor. Prices range from £199.99 for a 464 plus green screen to £349.99 for a 6128 with a colour monitor. Colour 464s cost £249.99, and green 6128s about £299.99. Prices vary – Birmingham's Selly Oak Comet, for example, is much cheaper (£50-£100) than the Bath branch.

The Centre on its own is £100. Amstrad User Club members can buy it at £90 without the desk. Independent computer shops have varied prices: the cheapest I came across was £70 minus the desk, £80 with the desk, from West Wilts Micros (☎ 0225 762759). Shops don't seem keen to split the deal up.

The signs from the shops are that people want them and as usual with Amstrad products, supply exceeds demand. With time, a new generation of CPC users will appear – and that can't be bad! ●

■ *There's a £25 reward out to the person who puts us onto the best Entertainment Centre deal going!*

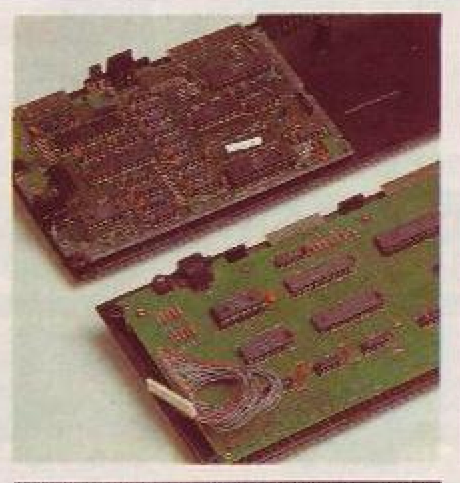
## Weighty decision

If it's a real, heavy duty computer desk you're after, Organisers supply one for £69.50. No ordinary desk, this has engineering worthy of Isambard Kingdom Brunel. Composed of heavy gauge welded steel, this product can withstand an awful lot of rough punishment. At 20 kgs, it's no lightweight: given the poor to average quality of many computer desks, investing in it makes sense. Contact ☎ 0902 338423.



## Very refined

- The latest CPC equipment has been redesigned: the circuit board for the latest 464, for instance, is half the size of the original. Changes to the 6128 are less dramatic, but some of the disk components appear to have been integrated onto a custom chip.
- One thing Amstrad have not done is to upgrade the ROM version or the memory. With all that extra space, it's the obvious thing to do. A '4128'? Not now. The new board is harder for engineers to repair than the old one, simply because the components are closer together.
- And the JY2s have also been modified. From now on, two player joystick games should be more common, because extra joysticks no longer clash with it.



● Top: the new, tighter design: difficult to fix. Below, the old roomy circuit board

# A horse, a horse, *£100* for a horse?

**The Budget hits vice-ridden STEVE CAREY pretty bad. In a desperate search for a remedy he turns to betting. Now read on...**

Just suppose a Martian were to land on earth. The odds are he or she (it?) would be more than a little amused by man's little foibles. Why are they doing *that?* might well be his favourite question: 'Why are people sucking smoke from lighted sticks when they know it kills them?' 'To dance in hot rooms to that racket is *fun?*' 'Why does Bobby Robson carry on picking Terry Butcher?'

But even if he could understand all these things, how on earth do we explain why people persist in putting money in slot machines, and bet perfectly good money on horse races?

It is, after all, a pretty stupid thing to do. But if you must do it, why not try and do it logically, betting on horses that the available evidence suggests are more likely to *win?*

Described modestly by Cascade as 'undoubtedly the best horse racing form calculator ever invented', *Form Master* has been developed and refined from a manual system 'over a period of decades,' and is the product of 'over seven years of computer software development.' All of this is no more than you'd expect for what is probably the most expensive piece of CPC software on the market, and in any case it would have to be pretty special for you to recoup your 'investment.' Perhaps Cascade are wise to insist that what you're buying is a *system* rather than a program (that's why, I'm told, the disk costs the same as the tape). But spending money on a form predictor system would surely impress our imaginary Martian more than picking a horse because you like the sound of its name.

"BET YOU A FIVER YOU CAN'T FINISH THE REVIEW IN TIME"

The 100 page manual is a crash course in sensible betting, and has little to do with the CPC. In fact you and your Martian mate could improve your betting chances considerably without ever loading the program, simply by following this advice. It hardly needs pointing out that bookmakers only make a living because they come out on top more often than not. Or to put it another way, because punters lose money more often than not.



photo courtesy of William Hill Organization Plc

● *Form Master* could swing the odds in your favour...

## Crash course

Information: that's the key. It is no use sticking a pin in a piece of paper, or picking a runner because you like the sound of the name. But where do you get the information? *The Sporting Life* or *Racing Post*, that's where. And if you thought computer manuals – and magazines – were bad for jargon, just wait till you see the race-cards in these papers!

One way *Form Master* limits your opportunities to lose is by restricting the races you should consider betting on. Don't bother with any race in which the prize money to the winner is less than £4,000, for instance, since the lower the prize the less likely it is that the horses will be raced to their full potential. The jockey is not going to risk causing injury or distress for peanuts. And forget races in which the jockeys are amateurs or ladies.

Neither should you consider a race in which more than 16 horses are competing, since the time involved in rating them would be prohibitive – and in any case, as anyone who's ever watched the Grand National knows, such races become lotteries or cavalry charges, with the best horses not necessarily placed. Accordingly *Form Master* doesn't allow you to rate more than 16 runners.

The time it takes to rate horses is considerable, at least in the early days. It is useful to know, then, that there are horses, just as there are races, you can ignore. Forget a horse that's never had a win, for example, or if the win was a walk-over, or a two or three horse race.

You are also advised to ignore a horse that's heavily fancied, being shown as 11/10, evens or worse. Now this looks decidedly odd: why should you write off a horse that's almost bound to finish well? The reason is that such a racehorse represents poor value: such horses do not win as often as you'd expect.

If time is short you may restrict your rating to the first five horses in the probable betting forecast: which have come in the first four in their last race; which was unplaced last time but is now ridden by the leading jockey at the course *and* is carrying at least 21lbs less; or any horse that was unplaced last time, but is now ridden by the leading jockey *and* this race's prize to the winner is at least half that of the last race.

## Under starter's orders

It should be becoming clear that what we're dealing with here is a sophisticated betting forecaster, and if you feel squeamish about complicated tabulations and cross-referencing you'd be well advised to hunt out the old pin, shut your eyes, lay your bet and wait for the damn beast to arrive in its own sweet time.

Still feeling enthusiastic? You come now to the Important Part: entering the data. In all there some 30 questions to respond to for each horse, and it must be said that for the first few times you'll wonder why on earth you shelled out a hundred big ones for a confusing system that may or may not work when you had a perfectly confusing system going that got guaranteed results (ie, lost every time). After a while, however, you get the flavour of the thing.




● You'll need a copy of *Sporting Life* or the *Racing Post;* a good head for numbers; and a definite budget set aside. *Don't squander the mortgage!*

## And they're off!

When you've finally discarded unsuitable races, eliminated all the inappropriate horses and discovered what *Form Master* makes of the ones that remain, you come to the crunch: parting with the cash. Anyone who's splashed out £100 on a betting program may need to be reminded that caution is the order of the day. The manual recommends that you set aside as a bank only an amount of money you can

afford to lose. Pay the mortgage and the bills, get in supplies of baked beans, feed the cat and *don't exceed your budget*. It's recommended too that you divide your budget into 20 equal units and never bet more than one unit on each race. That way, when it's getting dark and your 'certainty' still shows no signs of coming round the final bend, you can console yourself with the thought that you still have lots more money to throw away before it's time to barricade the door and hide from the bailiffs. (Australian Peter Carey's brilliant Booker Prize winner *Oscar and Lucinda*, by the way, features betting addiction as one of its many major themes. And no, he's not related. Well, not to me.)

```
THROWAWAY

ENTER LAST 3 FORM FIGURES
N.B. ENTER 0 FOR LAST OR
UNPLACED POSITION IN RACE

INPUT FIGURES ALTOGETHER
SUCH THAT MOST RECENT RACE
IS THIRD AND FINAL CHARACTER

IF LESS THAN 3 SYMBOLS IN
FORM SEQUENCE, ENTER '*' FOR
EACH PRIOR FORM POSITION
```

● One of *Form Master's* less straightforward questions

Entering the data gets pretty heavy going (pun intended) in places, especially when you are required to enter the horse's last three form figures. This is not as easy as you would think, because *Form Master* will only accept figures 0 (for not placed), 1, 2, 3, 4 and ÷ (meaning no data to insert at this point). Furthermore a horse may pull up, fall, be brought down by another horse and so on – all of which have their own alpha-codes, which must be converted into placings or ignored according to the long and detailed instructions. This is the toughest part of the system and takes longest to understand. It takes ten pages in the manual, and even after you've read it you still won't know what on earth is going on. Eventually, however, light dawns and the thing starts to hang together.

Some of the answers you are required to give appear somewhat esoteric, such as the number of days since last outing, the stall draw position and the distance the horse has travelled to the course. But as the manual points out, if a trainer has travelled 400 miles or more (round trip) it is unlikely that the inconvenience of the travel and potential disruption to stable routine is without purpose – and profit. At this point you need to turn to the cross-referenced gazetteer of main training centres and trainer locations relative to the UK racehorses included in the Appendix.

## Into the home straight

The program assigns values to each of your answers and adds them together to give a final rating with a maximum of 150 (flat) or 125 (jump). Top-rated horses rated less than 50 should be ignored; top-rated horses rated 75 plus are prime candidates for a result. Provided there's at least a ten point gap between first rated and second rated horses, you should be onto a Good Thing.

```
ENTER NUMBER OF COMPLETE
SEASONS COVERED BY TOTAL
JOCKEY AND TRAINER  WINS

EXCLUDE CURRENT SEASON
AS EXPLAINED IN GUIDE

3
```

● Somehow the baldness of the program is reassuring – as if they'd spent all the development money on getting the betting part right

The program clearly betrays its origins in the visually unexciting screens: don't expect fancy graphics or flashy displays. And it's irritating to have to press Return as well as a Y/N to enter a yes or no response – why can't it be a single stroke Y/N? Still, one gets the feeling that users have their eyes focused very much on the race card rather than the CPC screen.

And that, of course, is how it should be: you want pretty graphics, go buy a Raff Cecco game. You want a horse racing predictor system, you should consider *Form Master*. The only certainty is that you can't pick all of the winners all of the time: but if you follow *Form Master* closely enough, you should find yourself doing OK.

You might even wipe that infuriating smile off the Martian's face... ●

## FORM MASTER

**£99.95 cass/disk**
**● Cascade ☎ 0423 525325**

| GOOD NEWS | BAD NEWS |
| --- | --- |
| ■ The manual alone could save you making bad bets. | ■ £100 is a huge sum to 'invest'. |
| ■ Assumes no previous experience. | ■ Takes a lot of time and application. |

## You, better: believe it!

Betting is a complicated and arcane activity, with procedures and jargon that puts even computing in the shade. Fortunately the *Form Master* manual assumes no previous knowledge, and even a novice such as the present reviewer found little difficulty in finding the answers to questions as they arose.

Reviewing a betting system, however, presents special problems. These are compounded when it is insisted that the system needs a whole season to give it a fair trial!

Fortunately there is a short cut, in the form of an auditor's report, prepared by accountants Michael A. Corley & Co of Crowthorne in Berkshire. This report shows returns over a complete season of racing, based on top rated and on other qualifying races. The figures show *FM* producing a percentage return of as high as 259% – and in one, apparently untypical section, as low as 44%. Overall the report would appear to indicate that you could expect to make a healthy profit on bets placed – though no indication is given of how long it could take to recoup the £100 'invested' in the system.

It is also worth noting that *FM* appears to perform a good deal better on the Flat than over the Jumps, so the end of March through to November seem to be the best bet.

Another source of objective judgment on the system comes in the form of letters received by Cascade. One such, from a Michael V.R. Lancaster, was received by them on 29/1/89, and while he has a number of enquiries, observations and even one or two criticisms, Mr Lancaster does say 'It is by far the most brilliant system I have come across.' He goes on, 'Over the last forty years I have purchased hundreds of systems, most of them based upon the simple fundamentals of racing which anybody interested in the sport would already know. What makes *FM* different is the number of pertinent questions put about each horse.'

Since Christmas, Mr Lancaster writes, he has shown a profit of 'some £4,000 odd,' and since the date of purchase last July an overall profit 'in the region of £1200.'

One final test of *FM's* abilities was provided when Cascade threw down a challenge to William Hill, the bookmakers. Hill's offered £50 in free bets, with the profits going to the Children in Need charity. Out of five bets, *FM* produced two winners and two seconds, returning a profit of £25.






# FORUM

## A brand new question and answer session, with PAT McDONALD in the chair

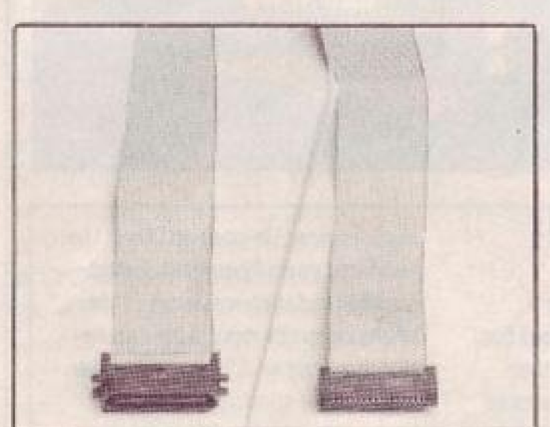
**Welcome to the first edition of *Forum*, the pages where you do all the work and Pat takes all the credit. Er, no, that can't be right...**

**Welcome to a new area of the magazine where Pat does his best to answer your questions and pass on your hot tips on all aspects of CPC computing. This month we fix your drive, put a rubber band to good use, and learn how to shadow box...**

### ● Shape and sound of silence

I have bought a 6128 and have a few questions. If I buy a Star or DMP3000/4000 printer, would I need a CPC lead? If so how much will it cost, and where can I buy one? When I bought the computer I received a bundle of freebie disks. One was called *Shape and Sound*, for which there was no manual. How does it work? What does it do?

**Jonathan Locke**
**Warrington**



*Yes, you do need a special lead, Jonathan. John Menzies charge £12.95 for them, which is a little steep: try any local independent computer shops. If they haven't got one in stock, ask them if they can make a lead. And this, as Jimmy Young's Recipe of the Day says, is what you do... Start with a 34 way IDS edge connector at one end (show them the back of your Amstrad if they're confused) and a standard 36 way Centronics parallel connector at the other. In between goes a ribbon cable, probably 36 way with two of the wires taken off. After crimping the two connectors on, they should charge about £8-£10. Ask them to insulate wire 14 (sellotape does the job) to prevent double line feeding.*

*As for* Shape and Sound, *that's a sprite and sound wave editor, which can be used to write Basic games. Contact the place where you bought the 6128 in the first instance. If they're obdurate, try Amsoft (who released the product) on ☎ 091 510 8777.*

### ● A question of disk-content

There is a problem common to all disk users: if you come across a disk you haven't seen for ages, you catalogue it and try to work out what all those strange filenames mean. Is it possible to give us a routine to allow 16 characters to be saved? Even better if the routine can be used with *Tasword 6128*. I realise this is a tall order, but *AA* has never refused a challenge.

**Len Phillips**
**Treherbert**

*Can anyone help? I daresay that it's possible, but the question is, is it possible to program such a utility that can fit into* Type-Ins? *A product is available from Romantic Robot, called* Rodos. *This is a ROM that, when used with a ROMboard, hijacks the disk operating system. When* Rodos *is on, Amsdos uses 16 digit file names, along with sub-directories and other very useful disk facilities. It costs £29.95, and Romantic can be contacted on ☎ 01 200 8870.*

```
Drive A: user  0

300      .     1K   FUSION  .43   6K
AIRBORNE.42   12K   ISS     .43  11K
BADNINJA.42    6K   ISS     .BAK 10K
BLANK   .      1K   PRACTICE.     6K
CHEAT   .43    5K   PROTEXT .BAS* 2K
CHUCKAFT.42   14K   RAMBO   .42   6K
DAYONE  .001   1K   SPEEDWAY.43   4K
DISC    .BAS   1K   TARGET  .     4K
DISC2   .BAS   1K   TITAN   .42   6K
DUO     .43    6K   WECLEMAN.     4K
FOURFOUR.42    6K   WECLEMAN.42   6K

 39K free
```

```
Drive :A

Not finished     RW  Ollies Diotion   RW
Untitled         RW  Titled           RW
Mostly Harmless  RW  Garbage          RW
Going            RW  Gone             RW
Gonewiththewind  RW  Forum            RW
Typeins          RW  Cheat Mode       RW
Trenton Test     RW  LittleBlackBook  RW
Pat'sNotFinishedRW  CrispyCheesy     RW
SomethingSilly   RW  CompletelyDifferRW
Spanner          RW  Filename         RW
Bugbear          RW  Topdog           RW
Gonzo'sEmporium  RW  MerryPranksters  RW
Autoque Stuck    RW  Pico File        RW
Giga File        RW  Reagan's Brain   RW
James Joyce      RW  Finnegans Wake   RW
FearAndLoathing  RW  His              RW
Hers             RW  Its              RW
SexDrugsRockRollRW  SwissBankAccountRW
TheLook          RW  Alook            RW
Secret           RW  Confidential     RW
Don't Read This  RW
Bytes free = 177.5 K
```

● Top: AMSDOS's stingy directory allowance; and RODOS's rather more generous 16 characters

### ● Protext conversion

I have had trouble converting document files created under *WordStar* on an IBM PC (the CPC version is similar) to a plain ASCII file. I want to amend and print these using a CPC and *Protext*, preferring not to buy *WordStar* for the CPC.

The problem is that *WordStar* adds 128 onto the last character in each word. There is an easy way to overcome this. By copying the file using the PIP command under CPM with the [z] option, the eighth bit of all characters is zeroed. This leaves a plain ASCII file ready and waiting for a decent wordprocessor.

**John Ambrose**
**Nuneaton**

£15

*Nice one John. We had this problem converting files from WordStar to Protext, and Richard Monteiro (gone but not forgiven) used the same solution.*

### £40 if you honour our offer!

*Forum* is designed to do the jobs previously done by *Words Work*, *Hot Tips* and *Problem Attic*, which always overlapped to some extent anyway. It will be as big as you want it to be – depending on your reaction and the number and quality of letters we receive.

To encourage you we're giving away £40 each and every month to the writers of the hottest tips and the best questions. So if you have a problem, or a solution, get it in writing now. Send it to: *Forum, AA*, 4 Queen St, Bath BA1 1EJ.

We're very sorry but we simply haven't the time to reply personally to your letters: so no SAEs please!

## Wears an expensive ribbon

DMP2000 ribbons, as we all know, not only wear out very quickly but are also hideously expensive. The following program helps to extend their life. It is not as effective as re-inking the ribbon, but works well up to a point.

```
10 REM Print Ribbon Darkener
20 REM by Ratz, Amstrad Action April 1989
30 MODE 2
40 PRINT "Print Ribbon Darkener:
   Press a key to stop"
50 PRINT #8,"TESTING 1.2.3...":REM Before
60 PRINT #8,CHR$(27);CHR$(69);:
   REM Turn bold on
70 PRINT #8,CHR$(27);"3";CHR$(1);:
   REM select 1/216 LF
80 PRINT #8,SPC((RND(1)*40)+30);"||":
   REM Print something
90 IF INKEY$<>"" THEN 120
100 PRINT #8,CHR$(27);"<";:
   REM Home printer head
110 GOTO 80
120 PRINT #8,CHR$(27);"@":REM Reset printer, turn bold off
130 PRINT #8,"TESTING 1.2.3...":REM After
```

```
Mary had a little lamb
Its ribbon was too pla
She typed in a program
And darkened it again
```

● A weak and washed out print from a tired old ribbon. Consign it to the bin?

```
Mary had a little lamb
Its ribbon was too pla
She typed in a program
And darkened it again
```

● No way! This is what Ratz's program does...

Making sure that there is some paper in the printer, run the program. About half an hour should be enough. Press any key to stop the program.

Compare the 'TESTING 1.2.3...' message before and after. You should see a difference, unless your ribbon is beyond the point of no return.

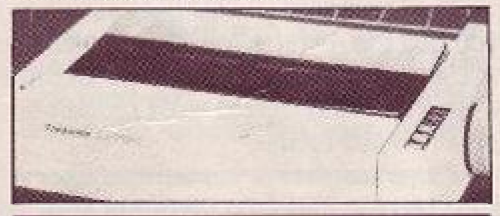
Another way of prolonging the use of a ribbon is to use bold when printing in draft mode. This does not actually *darken* the ribbon, as in the above program, it just makes it more readable.

**Ratz (aka DJ Bending)**
**St Neots**

*The idea of wearing out your ribbon to give better results sounds a little odd, Ratz, but having run the program over lunch break today, I have to say it does appear to work.*

## They won't talk to each other!

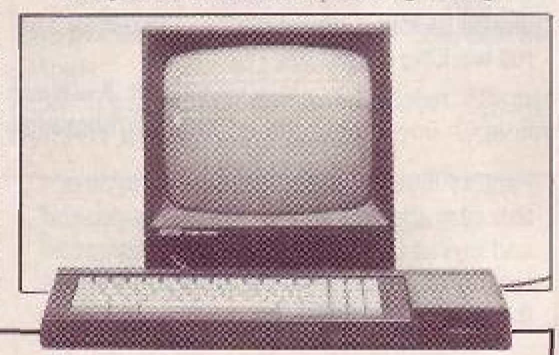
I have recently bought a CPC6128 and a Panasonic KX-P1081 printer. I cannot get the two to produce a program listing, unless I write it on a wordprocessor.



● Not on talking terms – Panasonic printer and 6128 refuse to discuss their problems

They seem to be compatible, but I just cannot work out how it's done. I've tried **PRINT #8**, **LIST** and several combinations of this, but cannot get any response.

Can you tell me what I am doing wrong?



And finally, while I'm at it, can you also recommend some good books on Basic programming for the 6128, because I for one find the manual very hard going.

**M. Palmer**
**Basingstoke**

*You were nearly there. The correct command sequence to print a listing of a Basic program on any printer is actually* **LIST #8**.

*As for a good read on programming,* The Amazing Amstrad Omnibus *by Martin Fairbanks, priced at £7.95 (ISBN 0-907563-82-1) gives plenty of ideas and insights. Though to be honest, I've yet to see a really good book on the subject.*

## A good READ

I am learning to program my CPC464 in Basic and can now put together some simple applications. I am currently working on a program to record monthly sales figures for several reps then obtain totals, averages etc and compare figures for the same months in successive years.

I am stuck though, and hope you can help. I need a routine to enter the figures for each rep and edit them if any mistakes have been made. The figures then need to be lodged in **DATA** lines, at the end of figures already there for that rep. I then want to recall the figures for each rep for manipulation. Now I've assumed that **READ** statements will do this, but I'm not sure – after perusing manuals and books I can't find anything more suitable.

**C Rimington**
**Birmingham**

*You're using Basic in a strange way.* **DATA** *statements are used to store static, unchanging values. What you want to do is to store these values in variables. The way to do this would be to give each rep a number, and set up various data arrays to handle the various bits of information.*

*So, say you had 50 reps. You'd need to know their names, last year's performance, this year's performance, plus any other snippets. To set this up use:*

```
DIM name$(50):DIM thisyear(50):DIM
lastyear(50): DIM... etc
```

## Don't crash – use a rubber band!

In *AA41* your reply to a letter in *Problem Attic* from David Mayden pointed out the very annoying problem of connector wobble and the subsequent crashing of the computer. I have a 464, disk drive and *Multiface II*, and for some time now no crashes have occurred. This is because I have two rubber bands about 100mm in diameter (measured while flat) holding the interface to the 'black box'. This tip may not be earth shattering or amazingly hi-tech, but it does work.

**Heath McStay**
**Carluke**

*Quite right too, Heath – I'd be inclined to argue that the lower-tech the solution the better. In fact there's a tenner on offer to the very lowest-tech solution to any computing problem! Tell us all about your second drive constructed out of papier mache and paper clips at: Low Tech? No Tech! Forum, AA, 4 Queen St, Bath BA1 1EJ.*




## Routine enquiry

I need a routine which starts and stops an onscreen timer by a trigger from the joystick port. I need it to resolve to the nearest 1/1000\th of a second.

**David Thomson**
**Glasgow**

*A tricky question. The internal Amstrad clock runs at 300 pulses a second. You're talking pure machine code here. Any offers?*




*To retain the information on tape or disk, use something along the following snippet to put the information into a file:–*

```
OPENOUT "FILE.ASC":FOR N=1 TO 50:PRINT
#9,NAME$(n):NEXT:CLOSEOUT
```

*To read the file back:–*

```
OPENIN "FILE.ASC":FOR N=1 TO 50:INPUT
#9,NAME$(n):NEXT:CLOSEIN
```

## The Shadow unmasked!

I have discovered a way of putting shadow on all text while using AMX *Stop Press*. Please note this doesn't work when 'centre' is selected from the format menu:–

Select the coordinates option.
Choose your font.
Position the box and note the coordinates.
Enter the graphics options.
Select the 'Quick Click Window.'
Select the white ghosting option.
Choose a light shade – they print better.
Select the thickest pen and spray over the text.
Re-enter the text option and the Q.C.W.
Reset the ghosting.
Select keyboard and position the box just a few pixels offset from the original coordinates.
Enter the same text as previously typed.
Press **RETURN**.

To enter text like the *Hot Tips* logo *(Don't you mean Forum? – ed.)*, that is as if cut and raised from a background, do the following:
Define a text window big enough to hold text.
Select 'centre' from the format window.
Enter text as required.
Select 'literal' from format window (do it now rather than forget).
Enter graphics option.
Draw a box the same size as text window around text.
Paint the box with a lighter shade.
Enter the window option.
Reverse the text window.
Enter text option and enter text slightly offset.

**Simon Bradbury**
**Mossley**

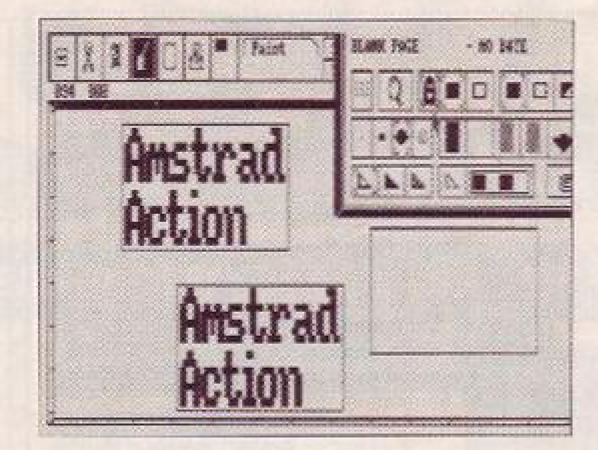
*I've tried it and it works!*

## Disk doctor part 96

When my 6128 became 'ill,' repeatedly reporting a **read error fail** and making a ticking noise, I attempted the remedy by your reader K. Greener (*AA*40), without success. Having given the matter further thought, I decided that the reading head could be misaligned over the disk track. This proved to be the case: here's what I did.

Remove the keyboard as described in *AA*40, and then position the whole assembly so that you are looking at the rear of the drive. To the left you will see the small stepper motor that positions the reading head, this being secured to the chassis with two small crosshead screws.

*Do not touch these yet:* first mark the present position of the motor. I did this by placing







● Above: **shadowing** using Simon Bradbury's *Stop Press* tips

two blobs of 'Tippex,' one on the chassis and the other adjacent to it on the motor.

When this is dry, draw a pencil line *exactly* across the two blobs. This is important, since the adjustment required is minute. In my case the difference was about the thickness of a pencil line.

The two screws may now be loosened, although you may find the motor difficult to move at first, since the screw heads have been coated with sealant.

Rotate the motor in small increments – anti-clockwise in my case – lock in position, and try loading from a disk. Eventually a position should be found where the drive is restored to full working order.

**R. A. Steane**
**Loughborough**

*Panicky legal disclaimer: while the logic of this cure appears impeccable, AA in general and myself in particular (gulp) can accept no responsibility for what happens if you try it...*

## Live and learn

To the thousands of parents with children suffering mental torture at the hands of the *Alphabet* (*AA*41) program, I apologise.

As presented, the program rejects all answers – even perfectly correct ones!

To rectify the situation, enter this line:

```
810 IF an$=geus$ OR an$ =
    UPPER$(geus$) THEN GOSUB
    910 ELSE GOSUB 860
```

## Prices and linefeeds

I noted with interest your answer to Martin Powell, the first letter of *Problem Attic AA*38, where you state that CPC Ltd will supply the 6128 manual for £12.83. I purchased the manual from them, last year and was charged £22.49. What happened? Have I been overcharged, and if so how do I go about getting a refund?

I am writing this letter on my CPC464 using *Mini Office II* and an sbcTB80 graphics printer supplied by Spectrum Group Plc., Hunting Gate, Hitchin, Herts. The problem I am having is the line spacing. On leaving the print options on default (ie line spacing set to one), I get a spare line.

The reply from the Spectrum Technical Director was that they have no experience of the combination of the 464 or the word-processor.

They sent me Technical Bulletin No.133, for setting the DIP switch to print the pound sign and also single line feed as follows, SW1--1-2, on. SW1--3-4, off. SW1--5, on. SW 1--6, off. SW--7-8, on. All SW2's were off. The only one I changed was SW1--6 from on to off.

The line spacing did not change, and the pound sign printed as hash. When I call up the spool text on the print option I then get no space between lines but erase the text. Can you help?

**L I Tillet**
**Isle of Wight**

*CPC Ltd assure me that the correct price, including postage and packing, is indeed £12.83. Mr. Duckett, their Sales Director, would like you to get in contact with him direct to arrange a refund.*

*As for your line feeding troubles, I'm appalled by the technical jargon Spectrum gave you.*

*Flick the dip switches back to where you had the pound sign. The problem lies in the CPC giving a silly voltage on printer line 14, which forces most printers to give two line feeds.*

*Either insulate or cut wire number 14 from the computer to the printer. Cutting is more permanent, but I prefer to just put some sellotape on the Centronics connector.* ●


A.L.P.H.A.B.E.T

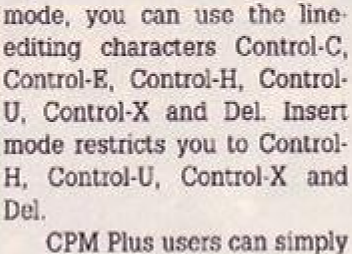
# BAR CPM

## It's curtains for RICHARD MONTEIRO, folks!

**Regrets, I've had a few too many. Yup, this is it. Finito, the end, there is no more. For our final session we examine ED.**

Supplied on your CPM system disk is the text editor ED. It's not on a par with *NewWord* or *WordStar*, but is more than adequate for creating short text files.

The ED utility is a line-oriented context editor. This means that you create and change character files line by line, or by referencing individual characters within a line. Sounds complicated? That's because it is! This, unfortunately, is CPM at its worst – what else do you expect from an ED? *(It's a good job you're going, Monteiro – ed.)*



● Here's hunky Monteiro, girls, as he graced the cover of *AA15*. Of course, he *was* a lot younger then (he don't half look old now)

To use ED simply type ED filename at the A> prompt. ED loads and the file filename is placed into the File Control Block (FCB). The FCB is the place where CPM stores the names of files it is dealing with. The prompt used by ED is the asterisk (*); this is displayed on your screen.

Most text editors assume you want to load and display the file whose filename you have supplied. Not so with ED. It must be told exactly what you want to do. For this reason you won't see the contents of filename on screen. ED uses a Character Pointer (CP) within the text file in much the same way as CPM uses a cursor to show your position within the screen display. Oddly, ED's CP is not linked with the screen cursor. Things get more confusing from now. It is possible to have the screen cursor at the end of the file while the CP is at the beginning!

### Chain of command

You interact with ED in either command or insert mode. From command mode you can enter the single letter command that reads text from the buffer, moves the CP or changes the ED mode of operation. When in command mode, you can use the line-editing characters Control-C, Control-E, Control-H, Control-U, Control-X and Del. Insert mode restricts you to Control-H, Control-U, Control-X and Del.

CPM Plus users can simply enter ED at the the CPM prompt: ED requests an input and output file later. 2.2 users must remember to supply one or both filenames. If the input filename exists then you must issue the A command to read portions of the file into the buffer. If the file size does not exceed the size of the buffer, the command **#a** reads the entire file into the buffer.

The i (insert) command places ED into insert mode. Any characters you type are stored, in sequence, in the buffer starting at the CP. Single-letter commands are usually typed in lower-case. The commands that are followed by a character sequence end with Control-Z. Any single-letter command typed in upper-case tells ED to internally translate to upper-case all characters up to Control-Z.

### Classic

When enabled, line numbers appear on the left of the screen and take the format n: where n is a number in the range 1 to 65535. Line numbers are displayed for your reference and are not contained in either the buffer or the character file.

And that concludes this whirlwind tour of ED. It's a difficult, unwieldly beast that makes *WordStar* seem friendly. ED's apparent complexity – at least when approached for the first time – is due to the fact that it operates in a very different manner to modern editors. When you get used to its command-line economy and operational elegance, you may well become a devotee. ED has remained virtually unchanged in all its incarnations. It is rightly regarded as a classic. ●

## Control-key EDiting

Along with the single character commands described elsewhere on this page, ED makes use of a number of Control-key sequences. Each of the following keys must be pressed simultaneously with Control. For instance, Control-H to delete the last typed character:

- C – aborts the current editing session, trashing the memory-resident text file in the process.
- E – moves the display cursor to the start of the next line. useful when typing in a long command.
- H – deletes the last typed character. Does the same as Del.
- I – moves the cursor to the next tab stop.
- J – same as pressing Return.
- L – inserts a line feed and carriage return code into the command line.
- M – same as pressing Return.
- X – deletes the current command line.
- Z – defines the end of strings.

## ED command summary

| Command | Action | Command | Action |
|---|---|---|---|
| nA | Introduce *n* lines from original file to memory buffer. | nL,-nL,0L | Move CP n lines. |
| 0A | Add file until buffer is half full. | nMcomms | Execute commands n times. |
| #A | Append file until buffer is full or end of file is reached. | n,-n | Move CP n lines, display that line. |
| B,-B | Move CP to beginning (B) or bottom (-B) of buffer. | n: | Move to line n. |
| nC,-nC | Move CP n characters forward (C) or back (-C) through buffer. | :ncomm | Execute command through line n. |
| nD,-nD | Delete n characters before (-D) or from (D) the CP. | O | Return to original file. |
| E | Save file and return to A> prompt. | nP,-nP | Move CP n lines forward and display n lines on screen. |
| Fstr[^Z] | Find character string. | Q | Abandon new file and return to A> prompt. |
| I | Enter insert mode. Use ^Z or Esc to exit. | Rfspec[^Z] | Read filespec into buffer. |
| Istr[^Z] | Insert string at CP. | nT,-nT,0T | Type n lines. |
| nK,-nK | Kill n lines from the CP. | U,-U | Translate to upper-case. |
| | | V,-V,0V | Line numbering on/off, display free buffer space. |
| | | nW | Write n lines to updated file. |
| | | nZ | Wait n seconds. |


● Mean, moody and magnificent... Well, two out of three ain't bad, Rich!

● Well folks, as the sun sinks majestically in the west we bid a fond farewell to Richard, who's been appointed editor of Future's *ST/Amiga Format (and you can whistle for the cheque Monteiro)*. We shall not see his like again (ahem).

# Comms a time (oh dear)

We challenged PAT McDONALD to come up with a new, bright and interesting headline for our irregular look at the twilight world of CPC comms.

We should have known better.

## MIDGET GEM

**☎ 0748 834836, 8 data, no parity, 1 stop bit, 300/300, 1200/75, scrolling Sysop: John H. Laffey**

Here are details on a new board, up and running since early February, that's a good example of a files board. The idea of telesoftware is easy to grasp: downloading programs to play on your computer. Files areas on bulletin boards are similar, except that what they offer are written documents for people to appreciate.

On *Midget Gem*, for instance, there's a file from a guy called David Barry, apparently an American. Anyway, the document was called 'a protest against natural childbirth,' and detailed his opposition to being present at the birth of his child. Heavy? Yes, but it's handled in a light and witty way.

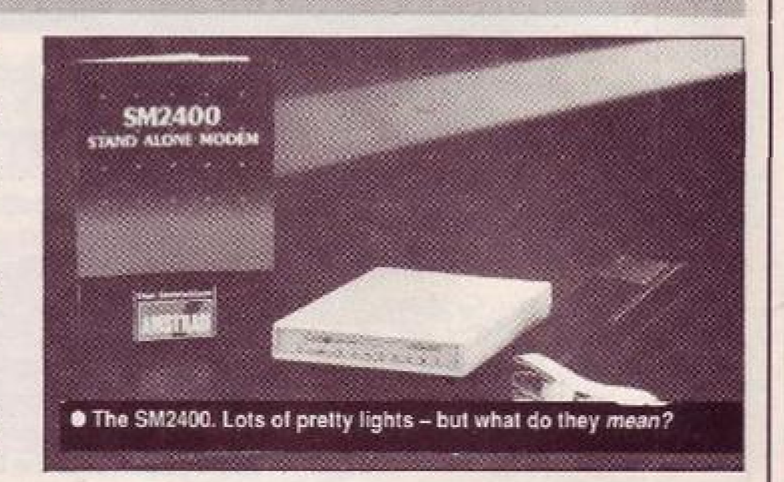
This is what the files/document boards offer. There's so much trash around these days (just pick up *The Sun* or *The Sunday Spurt*) that it makes a refreshing change to read something interesting and controversial that makes a point too.

This puts *Midget Gem* in a sticky position, legally. To counter the threat of writs (people sue so readily nowadays) the sysop has a large disclaimer printed on his bulletin – displayed everytime you log on. This doesn't prevent discussion though, and the message areas of files boards are full, with people arguing back and forth about the various questions raised.

## AMSTRAD SM2400 MODEM

**☎ 0277 230222 ● £286.35**

Amstrad have released another 'standalone' modem, suitable for any computer with an RS232 port – that includes, with an interface, the CPC. The SM2400 looks like any other modem these days: a low box with a couple of cables and connectors at the back, and loads of lights at the front.



● The SM2400. Lots of pretty lights – but what do they *mean?*

As comms freaks know though, looks can deceive. This modem can handle 300/300 (old and reliable), 1200/75 (viewdata), 1200/1200 (rapidly becoming standard) and the rare but very chic 2400/2400 baud.

This last speed isn't supported very much at present, but will become more so over a period ot time. And PSS (Packet Switch Stream – the direct database dialling system that BT operate) can handle it without any problem at all right now.

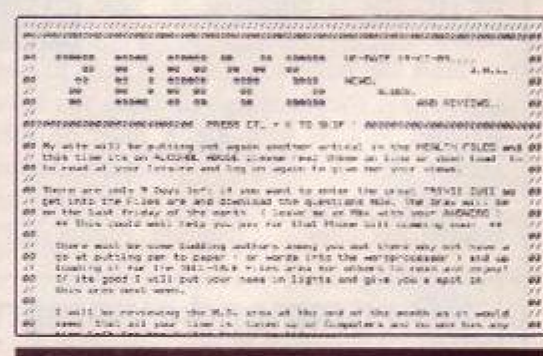
Speed is important, because you are charged for the length of each phone call you make. Downloading a file at 2400 takes an eighth as long as using 300/300.Buying a high speed modem makes financial sense if you do lots of downloading.

Using the modem is much like any other: it supports Hayes dialling commands and can auto answer if you're setting up a bulletin board. Another useful feature for the would-be bulletin board system operator is the facility to 'speed scan,' to match a modem calling up the SM2400. The number of lights at the front might be excessive for some tastes – the manual explains them well.

The SM2400 represents a sound long-term investment. Definitely recommended.

### Ideas exchange

The sysop's bulletin is called 'Seven Days,' featuring the usual system notes and further topics for discussion. For instance, when I logged on there was talk about Barbara Harris, first woman to be consecrated bishop. 'Should this be allowed?' asked the sysop. Yes indeed it should: it won't work if it's whispered. Another was about the 'micro revolution: does anybody use their computers for anything strange?' You don't *have* to answer that question.


● Seven Days on *Midget Gem*

There are boards catering for various interests: computers, radio hams, videos and films, horticulturalism etc. New boards spring up all the time – *Midget Gem* mentions some, including *Phoenix* (☎0249 817704) which is where you go if you want *the* definitive list.

There's also a fair sized file about setting up your own bulletin board written by Pete Franchi, co-sysop of *TUG II* (☎ 0905 775192). Although not specific to the CPC it makes very good reading.

For a new board's message area to have over a hundred messages is quite an achievement. *Midget Gem* is well laid out, well run, and ideal if you want a long-term board. Let me know what you think. ●



● Micronet: *AA* goes even more online!

## Updates

● *Micronet is soon to present AA public domain Type-Ins on their telesoftware service, so you can download programs directly into your machine and save typing! The system is undergoing tests even as you read this, and should be available on page *8116 soon.*

● Julian Sinclair of *Cynotel* (*AA40*) is introducing a lifetime membership for £7.50. This includes technical help (wouldn't it be nice to have an expert just a 'phone call away?) and specific areas set aside for members. *Cynotel* is a viewdata board ☎ 01 346 2816.


ROMANTIC ROBOT present
THE ULTIMATE PERSONAL COPIER
£5 OFF!
RESET
multiface two
STOP
If you wish to FREEZE any program any time and COPY it to disk/tape, fully automatically, at a touch of a button, then the MULTIFACE TWO is the ONE and ONLY answer! It is extremely simple to use, idiot-proof, menu driven with on-screen instructions, 100% reliable - PURE MAGIC...
Just RUN any program, STOP it by the FREEZE BUTTON, SAVE PROGRAM or SCREEN to disk/tape or use built-in MULTI-TOOLKIT to study, POKE infinite lives, ammo, etc. When you RETURN to the program or RELOAD it next time, it will automatically CONTINUE from where frozen. You DON'T need to do ANYTHING - just push the button, name the program, insert disk/tape and press a few keys.
MULTIFACE works on ANY CPC, needs NOTHING extra, and pays for itself: by buying 10 tapes instead of disks you can save some £50 - and MULTIFACE is only £47.95! NOW ON SPECIAL MAIL ORDER SALE at just £42.95!
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That alone would have satisfied many people, but Romantic Robot has gone one step further, incorporating a memory editor. No program is safe with this: everything is out in the open, including the Z80 registers, CRTC data and any part of memory.
Don't be fooled into thinking this will result in mass piracy, however. The Multiface unit itself must be plugged into your Amstrad to allow reloading of a program it saved.
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# The ROM ranger

**One of the most wonderful features the CPC's designers included in the system is its ability to access programs stored on external ROM chips. It's so fast to enter these programs from the keyboard that even disks look snail-like by comparison. PHIL CRAVEN, the ROM ranger himself, investigates.**

ROM stands for Read Only Memory. Unlike disks and tapes you can't alter what's on them – but then, you won't want to. They are quite literally memory extensions, with the computer's operating system containing all the software needed to use them.

Access is virtually instantaneous. A few key presses and there you are: the program you want up and running. The only real disadvantage, in fact, is that you don't get time to put the kettle on.

You can add up to seven of your favourite or most often used programs - disk utilities, word processor, assembler, general utilities, disk operating systems or whatever – if you have a 464 (including the disk drive ROM), and up to 15 for the 664 or 6128.

One obvious choice is to have your word processor on ROM, so that when you stagger to your desk first thing of a morning or after you come home from a long day at work, you can simply sit down, turn on and get going. None of this 'I'm sure I left xxx

The usual thing to do is to buy your ROM ready 'blown' or 'burned', which simply means with your software on (think of it like buying a record, which has been 'cut' and which can't be altered – only damaged!), from a mail-order firm or the occasional specialist computer shop. Try looking in *AA* adverts.

Once you have your ROM, which looks rather like a plastic centipede with metal legs, a ROMboard, with ROMs inserted, has to be connected to the 50 way expansion port. But which do you buy? Will this board work on that machine? And why the differences in price?

● There was an introduction to ROMs by Paul Calter in *AA39*

### MICROGENIC

● £29.95

**Microgenic Systems, P.O. Box 41, Wath-upon-Dearne, Rotherham, South Yorkshire, S63 7PS**

Bristling with features. Microgenic's board has eight sockets that can be set to high or low groups; each ROM has an enable/disable switch; and it has a Reset button. Its own unique contribution to ROMboard design is its overall enable/disable switch. Lots of software won't run if too many ROMs are fitted, and this extra switch disables or enables the entire board, with an LED indicating status. The time-consuming option would be to power down, remove the board and power up before starting again.

Size: 6.75" x 5.75"; uncased; connects vertically to the computer.

### KDS BOARD

● £24.95

**K.D.S. Electronics ☎ 04853-2076**

A compact six socket board, housed in a white plastic box and connected via a ribbon cable. Each socket has its own enable/disable switch. Its slots are fixed at 1 to 6 with no option of setting it to the high group. Dimensions are 3.75" x 3.5" x 1.25", but it's not size that matters.

The KDS board is not rigid inside its box, and although at first I didn't approve, I've since realised that flexibility when the computer moves is a Good Thing.

### JOHN MORRISON EXPANSION BOARD

● £21.95 (kit £16.75)

**John Morrison ☎ 0532-537507**

Another four socket board, perhaps best suited to the DIY enthusiast, since the facilities it offers are implemented with a soldering iron. Not only that, but it's cheaper to buy it in kit form. Its slots are fixed at 1 to 4, it is uncased, measures 5" x 2.75" and fits vertically to the computer.

Normally all boards take 8K and 16K ROMs, but this is one of two that also take smaller ones. Both boards are available in kit form and it is because the user is likely to be good with a soldering iron, and the smaller chips need a modification to the board, that the facility is included. No commercial ROM software is available on smaller chips but the feature can be used for ROM developement.

The instructions include a modification for adding a second board to run slots 9 to 12

Each has its own features, facilities and prices, and it is for you to make your own choice according to your needs. To give you the information needed to make that choice, we gather here for your delectation all the currently available boards. Others have come and gone, such as the Brittannia, but so far as we know we present all the current ones on these pages.

(A tenner is on offer to the first person who comes up with the details of commercially available boards not covered here!)

## Handle with care

ROMs, and other chips for that matter, are sensitive creatures. Some are susceptible to damage by static electricity: *never* touch the pins. And always insert them




## MAPLIN'S EXPANSION SYSTEM

● £54.95 (kit £48.95)
**Maplin Electronics**
☎ 0702-554161

The other board (with John Morrison's) available in kit form, it has eight sockets, low bank only, and is housed in a two-tone grey and aluminium box measuring 8" x 5.5" x 1.5". Connection is via a ribbon cable and it incorporates many of the features found in the other boards. The eight enable/disable switches, the two through connectors and the small chip capability are all included.

To call it a ROMboard, however, is an understatement. It includes a light pen socket, buffered decoding for up to 128 I/O addresses and a one meter 50 way ribbon cable and socket for connection to a Eurocard motherboard, which can accomodate six plug-in modules. To make full use of the I/O addresses and motherboard an additional power supply is needed which Maplins supply in kit form or ready made.

This board probably suits the DIY person both because of the expansion possibilities, and because none of the sockets work without a little soldering of links.

## CIRKIT HX-RX1 ROM EXPANSION CARD

● £19.95
**Cirkit Distribution**
☎ 0992-441306

Measuring only 4" x 2.75", it connects with a ribbon cable and has just four ROM sockets which can be configured to be in the low/high group. Associated with each socket is a bank of eight links representing slots 0 to 7 or 8 to 15 depending on the group selected. By positioning the links each socket can be mapped to any slot number and, uniquely, the position of each ROM, within the group, can be changed without even touching the chip itself.

The unit is supplied uncased – fair enough at the price, though it means that its underside, where all the pins are, slides across a desk if the computer moves. This can cause scratches and I would recommend the fitting of plastic feet, which cost only a few pence. Suitable holes to fit them already exist in the board.

## ROMBO BOARD ● £34.95

**Rombo Productions** ☎ 0506-414631

Probably the best known of all, the Rombo takes up to eight ROMs, configured to either the low or the high group. Each can be enabled/disabled by its own switch in a row of eight, although this is inconvenient for frequent use as the board is enclosed in a black plastic box measuring 4.75" x 3.75" x 1.75". Connection to the computer is via flat ribbon cable. The two through connectors provided are a bonus.

A unique feature is that slot one is extended to a small edge connector for the addition of either a RAM/ROM (£19.95) or a ZIF (zero insertion force) socket (£14.95). The Rombo is now the only board to which a RAM that behaves as a ROM can be connected. The idea is to load the RAM with a ROM type program and, as long as the power is kept on, it then behaves as a ROM. The ZIF socket simply allows a ROM chip to be inserted and removed without friction.

Though most users won't want to remove ROMs from the board, there are occasions, to avoid clashing with the ROM in a new peripheral for instance, when you might want to. It's possible, but it's not easy. Sockets are so close together and low down in the box that it is hard to get a screwdriver under a chip, and an extracting tool can't get between them either.

## ROMBOARD XTRA

● £20
**Microstyle** ☎ 0274-636652

Two unique features: it only fits the 464, since the 664 and 6128 monitor leads get in the way; and one of its seven sockets is set aside for inserting the 6128 system ROM and thereby upgrading the 464. It is uncased, measures 6.5" x 2.75" and fits vertically. ROM slots are 1 to 6, low bank only. Each socket has its own enable/disable link and a reset button is incorporated to reset the computer when the three finger trick won't work.

One socket is designed to take the 32K 6128 ROM, and a switch is included to change between the 6128 and 464 systems. With the 6128 ROM, a 64K expansion memory and a disk drive fitted, the 464 is effectively upgraded to the 6128 specifications.

Note: some 464s were made with their ROMs in sockets which only need removing to insert the 6128 ROM. Failing that, this method of upgrading is simple and effective.

**the right way round according to the instructions supplied with the board.**

**Some final points to bear in mind:-**

- **The 464 normally only allowS ROMs in slots 0 to 7 (the low group), whereas the 664 and 6128 can also use slots 8 to 15 (the high group).**
- **Slot 0 is used by Basic and is normally off limits to external roms.**
- **Slot 7 is used by the disc drive ROM, but is available on the 464 without drive.**
- **Boards which connect to the computer with ribbon cables lie flat on the desk behind it, others fit vertically and take up very little space at the rear.**
- **Unless stated, the boards will fit all CPCs.**
- **All boards have through connectors for further expansions.**
- **Normal retail prices are shown, but if you shop around you may well discover differences in price.** ●



# Budget software

**Flight simulators let you find out if you've got what it takes to fly an aircraft: *Yes Chancellor!* gives TRENTON WEBB the chance to pilot the economy.**

**This should be a laugh...**

## YES CHANCELLOR!

**Topologika ● £14.95 disk ● 0733 244682**

To bust or to boom, that is the question. Is it nobler in the bank to suffer the slings and arrows of high inflation? Or to take action against unemployment and by taxation end it?

The choice of policy is yours, in pay deals with public sector unions, international crises and the dreaded public opinion polls. The aim of the simulation is to stay in power for three terms of office, which is often not so much a question of fiscal policy as just hanging on.

Your term begins after an election, the economy looking reasonable. Your task is to keep things on track for five years. You have a Gross Domestic Product (GDP) of 1,000 million pounds and no pence. It's up to you.

First comes public expenditure, for simplicity's sake condensed into four major areas: defence, law and order, education and social fund. How much you have to spend is determined by the tax rate you set, whether you sell gold reserves and whether you borrow.

### 'Er indoors

To help you make these choices the computer drops hints, not about specific amounts, but about the areas that should be targeted. Moves popular with the public are highlighted. Whether you act upon them, however, may be influenced by such things as an election looming (not that budgets could be influenced by such tawdry things as opinion polls, could they?) and how much money you have left in the reserves.

Once your financial strategy is outlined you have to deal with the repercussions. First the new inflation rate is revealed, and then the public sector pay claims come in. The unions always want more than the rate of inflation, even more if the tax rate is high, and much, much, more if the economy is doing well, to share in the prosperity. So it's time to get down to the negotiations. You get the option of giving in immediately or slogging it out. If you choose the latter then you have three chances to make a reasonable offer before they troop out on strike.

Sometimes the unions cave in accepting half their original claim, other times it's all or nothing and a strike ensues. The effect on the country is illustrated by a set of graphs as you try and outlast your opponents. The cost, who's striking and votes won or lost as a result of your admirable hard line are all illustrated. Inevitably the nature of the negotiation forces you into a confrontational mode where union-bashing is as good business acumen or 'good negotiation.' Concession to their demands is met with the statement 'Don't play Santa Claus'!



● photo copyright Your Business magazine

● Ed's note to Trenton: for heaven's sake don't refer to *Psycho Pigs UXB* in the caption to the Nigel Lawson picture...

### Wapping pay rise

Once the union hurdle has been cleared it's time to proceed through the rest of the year. Interest rates have to be set, reserves adjusted and industry invested in – or not. Then the reports on your performance come in. The state of the economy this year and its predicted shape the next are outlined by the treasury. Public opinion about your performance is measured against the opposition's policies, your inflation record is shown, as well as other graphs which indicate your relative success or failure.

Every five years there is an election (and regardless of what the manual says, you *can* fool all the people all the time. Give 'em bread and circuses at the beginning of your fifth year and watch your popularity rating rise). After the business of the year is done, you sit and watch as the votes are counted and seats are won and lost, success is greeted with an offer to continue in the job.

*Yes Chancellor!* is a good introduction to the workings of the economy. It is restricted enough to make it understandable to the layperson, but realistic enough to make success all but impossible for any great length of time. There are elements of the economy that are not represented or apparently misrepresented, but on the whole it manages to avoid political doctrine.

### The NHS is safe with Trenton

Unfortunately the educational benefits of the simulation are limited. People interested in the economic mechanics of the modern world will do well, and learn more. Those left cold by the words 'fiscal policy,' however, will simply treat it as a simulation, and play games with the economy, raising taxes, disbanding the army, giving the nurses a decent wage (ooh, political, political) and so on.

Students learning economic systems and theories will also find *Yes Chancellor!* frustrating, for while it is a very precise working model of the British economy, it is a simplified one. No line is drawn for example between the various forms of taxation, direct or indirect, progressive or non-progressive. So in making the simulation accessible to the person in the street Tom Tuite has destroyed its ultimate educational goal, by removing the chance for true experimentation. ●

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| Taxation | : | OK. | Unpopular! |
| Labour | : | OK. | |

● You couldn't see your way clear to lending us a billion or so, could you – just till the election's over?

And it's one for the money, two for the money, three for the money...

**GOOD NEWS**
- Educational...
- and fun too.

**BAD NEWS**
- A little dated politically in parts.
- Necessarily simplified.

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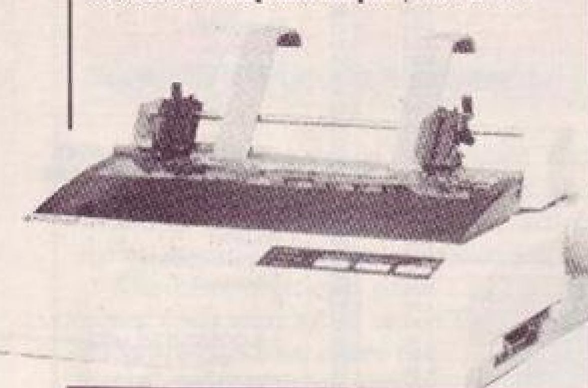
The printer market is highly competitive, with ruthless price slashing. Enter PAT McDONALD gingerly in search of a good budget buy

## CITIZEN 120D

☎ 0800 282692 ● £159 ex VAT

Around for years now, the Citizen 120D has established a firm following. It comes with a separate tractor feed attachment that must be connected if you want to use pin fed stationery. It's on the slim side, at around 3.7 kgs. and 370mm x 90mm x 238mm.

Output looks good. Draft quality is 'dotty,' but NLQ is sharp and simple. (The relative



● Citizen 120D – faithful hound

lightness of the 120D examples in comparison to the MT81's is due to an ageing ribbon in the Citizen. Still, that's what they sent us, so they only have themselves to blame.)

A quiet printer, the Citizen features a side connector rather than a rear mounted one. If you have a printer stand you can feed continuous paper through the printer's base, rather than the top.

The manual includes a complete written breakdown of all the printer control commands, and their effects.

The Citizen's faults are that the draft quality is poor, and that it takes a couple of seconds to switch on or off. The feeding mechanism has some 'play' in it, and although this makes loading paper easy, it does suggest that it may not have an especially long lifespan.

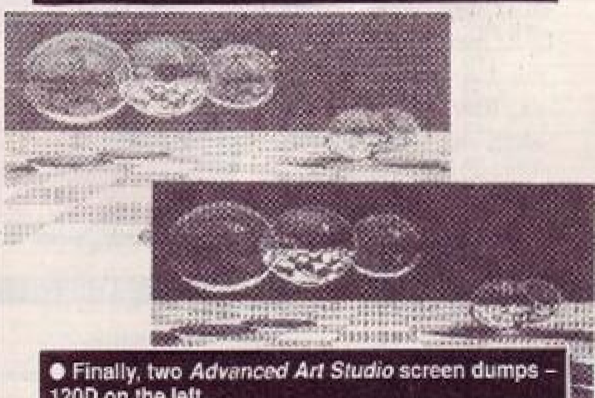
Several years after its debut the 120D is still a good buy if you can get it for a substantial amount below the £159 rrp. If you use your printer in different locations it's a fine choice.

```
!"#$%&'()*+    !"#$%&'()*+
,-./01234567   ,-./01234567
89:;<=>?@ABC   89:;<=>?@ABC
DEFGHIJKLMNO   DEFGHIJKLMNO
PQRSTUVWXYZ[   PQRSTUVWXYZ[
\]^_`abcdefg   \]^_`abcdefg
hijklmnopqrs   hijklmnopqrs
tuvwxyz{|}     tuvwxyz{|}
```

● The character sets, in Citizen draft and NLQ

```
!"£$%&'()*+    !"£$%&'()*+
,-./01234567   ,-./01234567
89:;<=>?@ABC   89:;<=>?@ABC
DEFGHIJKLMNO   DEFGHIJKLMNO
PQRSTUVWXYZ[   PQRSTUVWXYZ[
\]^_'abcdefg   \]^_'abcdefg
hijklmnopqrs   hijklmnopqrs
tuvwxyz{|}~    tuvwxyz{|}~
```

● MT81 style draft and NLQ



● Finally, two *Advanced Art Studio* screen dumps – 120D on the left

● Anyone who pays list price for a printer deserves to spend an evening with Trenton Webb in a phone box of their choice. RSC Ltd (0923 243301), for example, offer the Citizen 120D at £135 (ex VAT, p&p included). Why such silly list prices appear at all beats me.

## MANNESMANN TALLY MT81

☎ 0734 788711 ● £149 ex VAT

The latest addition to the MT range ought for that reason to be a generation ahead of the Citizen. It uses both single sheet and continuous stationery without recourse to extra items. Tractors are located behind the printing area, minimising paper waste.

Measurements: 370mm X 100mm X 265mm; weight, 4.5 kgs. Two lids are included, the lower one keeping dust out of the printing mechanism, while the upper protects the feeding arrangements and acts as a tear-off edge.

● MT81 – new pup

Like the Citizen the MT81 prints Epson as well as IBM graphics. Even in draft mode print quality is good: the printhead pins are square rather than round, and put ink onto greater areas. This produces excellent screen dumps. The square edges of pixels were always rounded off on the old round pin printers, and the MT81 is an improvement.

The printed output is more ornate than the Citizen, apparently originating from a typewriter. Steve said he actually preferred the 120D's lean style, while Trenton sided with me in preferring the MT81. There's a lesson there for us all, but I don't know what it is.

Friction/tractor select and roller lever are available outside the case, so you can leave it set up. It is, however, a little noisier than the Citizen.

The manual is superb, the best I've seen for getting started. Each stage of tasks like changing ribbons and inserting paper is covered by several sketches.

It falls down, though, in explaining control codes. For that you have to buy the applications manual (not yet been priced).

The attractive MT81 gives an impression of sturdiness and longevity. It features good graphics and text printing. Certainly I'd exchange it for my old printer.

## How they compare

Don't believe manuals. The 120D claims 120 characters per second, and the MT81, 130 (both in draft mode). Neither figure includes print head return time. In truth the 120D comes out slightly faster at printing complete pages of text, and also at a 'worst possible case scenario' where it prints on alternate sides of a page. Difference in speed is about 6%.

A cut sheet feeder for good quality stationery is available for both machines. The MTF81 costs £82 (all prices exclude Vulture Added Tax) and the Citizen one £65. Serial interfaces are available for both machines – the MT one is £42 and the competition's effort £54. The MT81 applications manual had not been priced at time of going to press.

Even so, and given a marginally slower speed, the MT81 represents the better buy. Print quality is – arguably – better, and the cheaper price (it's starting at that: it could be cut), better construction and tougher build make it the clear winner.

## Connect up

The CPC printer port is of the 7 bit variety: printer characters over 127 are generally unavailable without clever software or hardware (8 bit printer interface from KDS costs £19.95 ☎ 04853 2076). This is a pity, since both printers support 8 bit IBM graphic codes – special characters such as Greek letters and scientific symbols.

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# ACTION TEST

Alleluia! Alleluia! Alleluia! – Oh don't make such a fuss, it's only TRENTON WEBB...


➤ *MASTERGAME: Vindicators* (p.38)
➤ *ISS* – programmer interview (p.40)
➤ *Last Duel* – no innovation awards (this page)
➤ Cecco's latest – *exclusive* interview (p.45)
➤ And Dizzy is back, eating *Fast Food* (p.36)



**MASTERGAME**
**Vindicators**
**pages 38-39**

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| *Dynamic Duo* | 44 |
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**RAVES**

*Incredible Shrinking Sphere* 40


## LAST DUEL

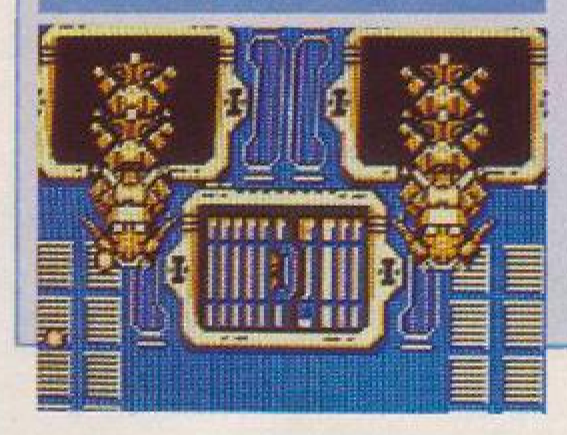
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Bored with conventional shoot 'em ups? Tired of solving adventures too quickly? Do you sit on the edge of your seat eagerly awaiting the next big breakthrough in the computer game world? Do you turn breathlessly to each review longing for a completely new concept in game design? Well, I'm sorry but the wait continues, and until then here's a game that breaks no new ground whatever.

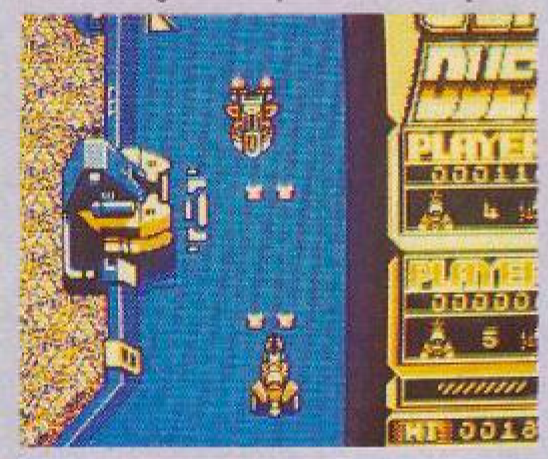
The storyline tells of a ferocious war between the twin planets of Mu and Bacula. During the fighting Princess Fheeta (gawd bless 'er, guv, I fink she's luverly) has been kidnapped by the Golden tribe from Bacula. So what's to be done? Pay the ransom and get her back? Forget her and pretend you've always been a republic? Or kill as many of the Golden tribe as is 'Muainly' possible, with only a very slim chance of rescuing the Princess into the bargain?

The latter is the only feasible option, of course (!), and you're going to need the very latest super-dooper death-dealing devices to do it. So what have those geniuses at the weapons factory come up with? A three wheeled battle car. Oh yes thank you very much, just what you always wanted, an armoured Reliant Robin. The enemy uses tanks, gun emplacements and monsters, and you get a vehicle that hasn't even got a reasonable number of wheels!

● These things just Dragon and on



Beginning in a long metallic corridor on a vertically scrolling screen, your aim is to drive your wonky battle car (and fighter plane in two player mode) along the valley, avoiding the enemy defences or simply blowing them out of the way. Baculian craft try to shoot or ram you, while fortifications are placed *en route* to try and force you over traps in the road. To fight back you drive over power



● Three wheels on my Robin...

icons during the run, increasing the amount of shells you launch and improving your chances of hitting those Golden Tribesmen in the Baculas (that'll bring tears to their eyes).

The vehicles used alternate level by level. Player one's are the three wheeler on levels one, three and five, and a rocket firing space-plane on two, four and six: player two uses the fighter plane for all levels. This adds to the level of difficulty, especially on levels one, three and five, for you must avoid shooting your team-mate, who would probably not see the funny side.

The end of stage Guardians, which also vary from level to level – dragons, bats, dinosaurs, spiders and the like – add variety and difficulty sadly lacking during the rest of the game. Not that the game is easy to complete. Far from it, the same theme is just repeated endlessly.

Graphically *Last Duel* is excellent, with superbly smooth sprite movement backed by a great soundtrack. As with most of this month's games, though, highly competent artwork, coding and music do not mean that the actual game is enjoyable and worth playing. It's better than a duff game with naff sound and vision, but hard graphic and audio work are let down with poor gameplay. **TW**

**FIRST DAY TARGET SCORE**
Complete level one

### SECOND OPINION

*"The game is very different from anything I've seen. I wasn't sure what was meant to be happening or what I was supposed to be doing. Graphics are good, but that's all there is."* David Patient (12)

**GREEN SCREEN**
*clear as a bell*

### The Verdict

**GRAPHICS ........ 87%**
■ Solid gold graphics.
■ But you keep falling off the screen.

**SONICS ........ 76%**
■ Sombre soundtrack...
□ ... but great all the same.

**GRAB FACTOR ........ 47%**
■ Not so much a grab, more a limp handshake.

**STAYING POWER ... 56%**
□ Worth playing for the pictures and music.

**AA RATING 63%**

■ Nothing to make it outstanding.



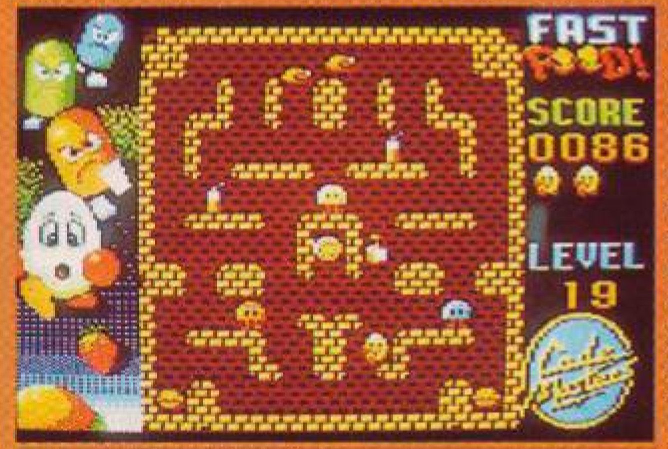
# FAST FOOD

**Code Masters ● £2.99 cass joystick/keys**

Another cracking AA eggsclusive!

Yes, it's that loveable funster (!) eggain. Dizzy, the Oliver Twins Pension Fund. Did you think such an eggciting character could stay away from the screen for more than a month? Of course not. Eyes down for a full plate: here's *Fast Food*.

This is no ordinary 'Dizzy' game, though, and no longer is he confined to desert islands (shame!) and the like. He's out and about and living at Hampton Court. Well, maybe not Hampton Court eggsactly, but a system of mazes he runs around munching all in his path. The aim is to consume all manner of high fat and low fibre items before assorted meanies put him on a diet for the rest of eggsistence.




● A real chicken and egg situation

Sound familiar? Of course it does! Dizzy has got Pac Man-itis! This disease, usually fatal, causes the unwitting sufferer to charge around labyrinths in search of said objects until such time as he or she is caught and eggsterminated by an ever increasing host of pursuers. The disease can even be passed on to anyone eggsperiencing eggsposure to such a game, resulting in one of two states. If it is a bad case (a duff imitation not fit for human consumption), then the result is massive boredom; and in rare cases (a novel twist on a classic idea), complete and utter obsession.

*Fast Food* is an eggsample of the latter, a really original arrangement of a concept that by all rights should have given up the ghost, and be pushing up the daisies long, long ago.

## SECOND OPINION

*"An ineggspensive, eggceptionally eggcellent, eggshilarating and eggciting entertainment, if somewhat eggshausting, that eggceeds eggspectations. And I'm not eggsaggerating! (Sorry about the eggcruciating yokes, though.)"* SC

**GREEN SCREEN**
*Eggceptable*

It has that one vital ingredient so often lacking: yokes. This humour is supplied by the eggstra special host Dizzy himself, of course, offering your reviewer the chance for some eggscrutiating puns.

Dizzy quite simply has to neggotiate the mazes and eat the various food stuffs he finds there. The menu is not large, varying from hamburgers to milkshakes, jars of relish to roast chickens. (Aha! So Dizzy is a cannibal! Doesn't he know where eggs come from – and I don't mean Tesco's?) Moral outrage aside, the purpose of eating all this 'wholesome fare' is to gain points, and a couple of kilos into the bargain. That is the entire focus of the game. No killing, no rescue, just a chance to score more points than any one else and to boost your eggo.

The first few levels are as easy as even an egg wearing boxing gloves could wish. With no-one trying to eggsterminate him it's just a case of getting used to how the mazes work and what effect the special items that appear have. Eat the green rhubarb and you speed up (well, you would, wouldn't you?), red rhubarb and slow down (huh?). Others such as red relish makes your pursuers freeze, while green makes you invulnerable to their touch.

As you progress not only do the mazes get more difficult, but the numbers and doggedness of chasers, all suffering from omelette frenzy, increases. Every move becomes more frantic as you feel you've leapt out of the frying pan (sorry Dizzy) into the fire.

The whole game eggsudes a refreshingly self-mocking air. The soundtrack eggshibits the now traditional synthesised speech, as always more synthesised than speech, and a tune that runs throughout the entire game. It's not eggsactly eggsciting, but its slapstick fit the game like an egg cosy.

Neil Adamson's graphics also have a yokiness about them that make the game fun to watch as well as to play. Incidental details to the game itself such as the side illustration is a fitting eggsample. Little Dizzy is seen eggscaping Bonzo, Fido, Pipa and Wiza (the pursuers) with a look of slight concern on his face. In fact eggstreme terror would be a better phrase. On screen the action is clear and bright, with even the fine detail such as Dizzy's little red wellies and gloves waggling around like mad whenever he runs (too much of that green rhubarb!).

So *Fast Food* is an eggception to the rule that you can't revive a old idea and make it eggsciting and enjoyable. The range of difficulty is such that young and old gamers can all play and find a challenge, without needing superfast reflexes or being an egghead. The fresh style of presentation and lightness of touch making it must for Pac fans and Dizzy eggsperts alike.

TW

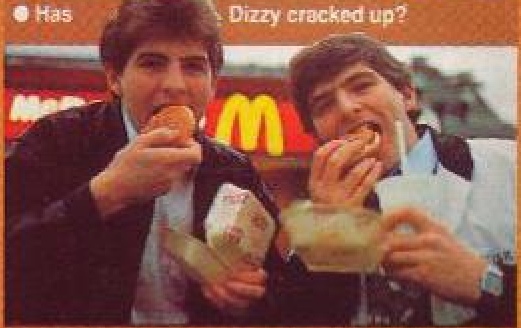
FIRST DAY TARGET SCORE:
depends on your age and ability



● He's not showing off – he's just an eggstrovert




● Has Dizzy cracked up?



● The Olivers research *Fast Food*. (Pat McDonald is *not* responsible for McDonalds, by the way)

## The Verdict

**GRAPHICS ........ 77%**
- Varied maze designs and layout.
- Little cartoons are fun to watch.

**SONICS ........ 73%**
- Jolly tune.
- Olivers twins: sack your voice-over man *now!*

**GRAB FACTOR ........ 71%**
- Easy to pick up.
- But remains challenging to the end.

**STAYING POWER ... 81%**
- An eggstensive number of levels.

**AA RATING 77%**
- Great value for such an ineggspensive game.


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# VINDICATORS

**Tengen ● £9.99 cass, £14.99 disk keys**

Take two tanks, add fourteen space stations, a few bangs and flashes and what have you got? You've got what sounds like the ideal formula for a no-holds barred arcade conversion, that's what. As Tengen's first launch, *Vindicators* is the shape of things to come: but what shape is that? For the answers to these and other questions, read on MacDuff. (It's not every computer mag that offers you Shakespeare quotations in the first paragraph of a games review!)



● Tanks for the memory

As reported in last month's *AA*, Domark has secured the licence for the conversion of at least five Atari coin op's over the next three years. The lofty boasts of the launch can now be examined in the cold light of a CPC monitor, as *Vindicators* come to town.

The Tangent Empire (any relation to the Logarithms and the Cosine tribe?) are trying to take control of the Outside Galaxy, TR15. You, commander of a SR-88 Strategic Battle Tank, are trying to stop them carrying out their evil plan. There are fourteen space stations to be captured if you are to halt the invasion. So it's into the mother ship and a-warping we will go, to start Vindicating.

You start by selecting which station you liberate first, and then sit back and watch as the stars glide by in warp drive (very *Star Wars*, like it). Now these are not your average white on bluey-black, but pretty little multi-coloured things that fly past, setting the tone for a colourful and fast game. Then as if by magic your tank (or tanks) are unloaded and it's time to go off at the Tangents.

So. The waiting is over and wasting begins. The balance of power is good: your tank is better armed and armoured than the Tangents, but they have the numerical edge. This is the plan: duck and dive the shots of the opposition, using the interior walls of the station for cover. Then sneak up on the enemy tanks from the side or behind, and let them have it. If a head-to-head shooting match develops your SR-88 will come out tops beyond doubt, but only once or twice. Your armour very quickly gets blown to pieces if your concentration lapses.

The Tangents are a vicious and vindictive bunch and would probably make good magazine editors *(I heard that, Webb – ed.)*, and if you sit still for more than a minute they gang up and come down on you in force. This is an advantage if you're well up on armour, because it saves hunting them down, or a real downer when supplies are on low and there's nowhere to run.

AA MASTER GAME

The waiting game is not helped by a bomber slowly pursuing you. Remain stationary and it drops bomb after bomb on your shiny new tank, sapping valuable armour. And since he's flying you can't shoot him!

All the protection you can find is needed for that other old chestnut of the Tangent world, pill boxes. These literally pop up everywhere and are both good and bad news. Good because when destroyed they leave behind nice little presents (more of that anon); bad because destroying them is not easy. The turrets are square fortifications that fire in almost any direction, and have only one vulnerable spot. Timing is essential to gain the reward without taking a hammering.

The goodies the exploding baddies donate to the *Vindicators* war effort ('stars' or fuel) can be traded like tiger tokens once you have liberated the space station. Other bonus stars and fuel can be found abandoned by the fleeing Tangents, or by attacking a tough station.

The stars help you furnish the tank of your dreams, with extra shots, armour and powers that give you a little more bang for your buck. The fuel gives you the power to get through the station (last petrol before the motorway sort of thing).

The great feature of *Vindicators* is the two player function. This is nothing new, but often it just confuses the game play with too much action. This is not the case here, for the tank sprites are clearly defined but not overly large, allowing two players enough of the screen to know what's happening.

The 3-D multi-directional scrolling screen, faithful to its Atari ancestors, is full of colour – not all tasteful – and strong on solid stable settings. Everything moves well without flicker, and the visual effects, explosions and warp drive are a pleasure. The CPC's colours and graphic capabilities are expertly exploited to give the game variety and character.

Your tank is not simple to control. The problem is the nature of the original arcade machine, which featured two hand-grips per tank, one for each caterpillar track – which can't be reproduced even on a CPC. A compromise has been achieved. Four keys are used: one each for forward and reverse, and

## SECOND OPINION

*"Everything Trenton says is true, though perhaps he doesn't quite get across what a good looking game Vindicators is. In fact, my only complaint is that the title of the game is so boring.*

*"The game itself certainly deserves better!"* SC

**GREEN SCREEN**

*Gameplay is fine, if dull in comparison*



● These three shots show how you can 'customise' things to suit the wallpaper and carpet of your own room!



for turning left and right. Sounds simple, but in the heat of battle when your tank has rotated several times it's an achievement just remaining orientated and not accidentally firing on your partner (the last thing you want to do, especially if they're ahead on points, hint hint).

*Vindicators* is a great arcade conversion. It's fast, furious and fun, especially in two player mode. Many hours work will go into reaching your 14th space station, only for you to mix up the controls and get blasted by your team mate (whoops!). There's not much think about, but the game's pace ensures this doesn't really matter. You just keep blasting.

At the launch of Tengen Mark Strachan (joint Managing Director of Domark) expressed their aim thus: 'We want to provide the end-user with high quality, faithfully converted and thoroughly enjoyable games'. As the first release on a new label they *had* to get it right, or Atari would have slapped their legs.

The question, though, is whether they can maintain such a high standard? If they can it looks like a good year for CPC owners everywhere – if not so hot for the Tangent Empire. TW

**FIRST DAY TARGET SCORE**
Trash a space station

● Put a tiger in your tank

● Don't be such a Panzer, stand and fight!

● See ya later, Vindicator!

## The Verdict

**GRAPHICS** .................... **92%**
- Vibrant sprites and backgrounds.
- Vile blend of colours (love it!).

**SONICS** .......................... **82%**
- Vicious explosions.
- Very tiring after a short while.

**GRAB FACTOR** .......... **79%**
- Versatile tanks are an immediate hit.
- Vacuous plot, but it doesn't really matter.

**STAYING POWER** ... **86%**
- Violent fun for hours of destruction.
- Great battle in space.

**AA RATING** **90%**
- Vent those vile, violent tendencies and get vindicating.
- With luck the vanguard of a new wave in arcade conversions.



# INCREDIBLE SHRINKING SPHERE

**Electric Dreams ● £9.99 cass, £14.99 disk joystick**

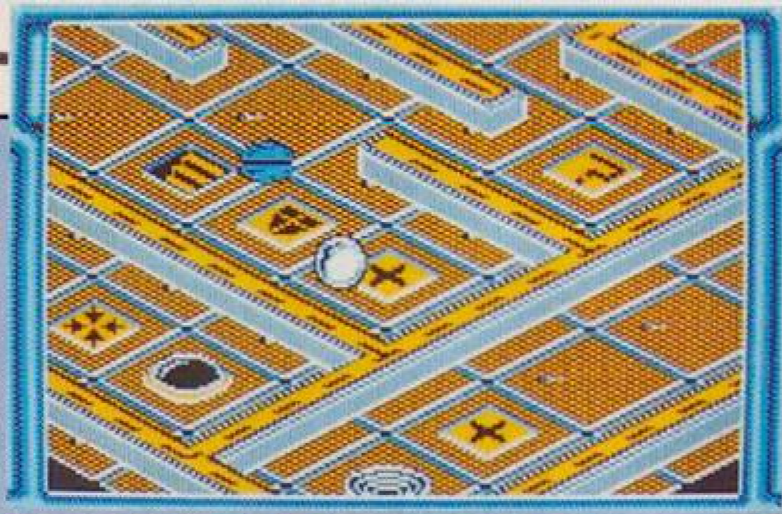
Balls. That's what the Sangfalmadorians have loads of. So many, in fact, they even fly them into battle. But this requires training, the passing of a 'driving test' and so on, and that's where you come in. For you've been elected as saviour of the Sphere Corps' battle training school.

They have this problem. Their Colonel-in-Chief Matt Ridley has gone a bit off his rocker. Tired of being desk-bound he went and jumped in one of the fighter spheres, and tried to complete the training arena's 'Death Run' (friendly sort of name) in one go. He didn't quite make it. Well , he got himself into the scrape, and so in my opinion he can jolly well get himself out.



● Going at it like a ball at a gate

As the brave hero of the hour however, you're not as heartless as this ruthless reviewer, and take the job (you mad impetuous fool you). So into the fray you leap – after, that is, leaping into your ball. Before attempting the 'Death Run' though, there's a few things you need to know if you are to avoid the same fate as Col. Ridley.



● 'Ever since I was a young boy, I've played the silver ball'

The training arena is viewed from the side and scrolls around your sphere as you wander into the wild blue (well orange) yonder. The screen is crisp and clear, generally moving smoothly. It's only when high speeds are reached, or there is an exceptional amount of sprite activity, that there is the occasional flicker. Its graphic design, though, is most disconcerting, for it lacks shadow. The result is that you get disorientated, with the screen appearing to turn upside down (along with your stomach).

AA RAVE! AA RAVE! AA RAVE! AA RAVE! RAVE!

The Corps use the training area to give pilots experience handling their combat spheres in dangerous situations. It is composed of tiers of mazes, constructed from 'tectonic tiles'. The aim of the training run is to work your way through the labyrinth, proceeding down through four levels, each of which is subdivided into plates. This sounds simple enough, but there's a catch (isn't there always!), for throughout the maze are numerous ways of catching out the reckless, and sending them to their doom.

To start with, each tile contains a self destruct timer which is activated when your ball passes above it. Even though every tile takes a different time to self destruct, this effectively means there's no turning back. For if you are foolish enough to stray over a destroyed tile you find that it has turned into a sphere vapouriser. Not something that can be considered good news.

Furthermore throughout each level, just for good measure you understand, are Assassin Spheres. These chaps are annoying little devils that seem to be generated indefinitely from little cellars in the maze. Their aim in life is to collide with the Sphere and then explode, killing you both. Not much of a job, but they do it with gusto (who's gusto?) and annoyingly well.

Last in the long list of features out to get you, and the most important of all, is that some of the tiles you have to go over actually alter the Spheres' molecular structure. One tile makes you bigger, one tile makes you small, and some distort your volume – which is where the title comes from.

This can be both a bugbear and a boon. Sometimes the extra manoeuvreability of the small sphere is desirable, other times a lightweight version can be useful to help you skate across a decaying tile. On other occasions your speed or weight may be altered, and the resultant loss of control causes you to career into one of the many traps scattered carelessly around the place. Ones to watch out for in particular include prisons, points deductors, pinballesque rebound pins, moving walls and countless other goodies to amuse, amaze and annoy.

On the plus side (at last something to give you a chance) you are allowed to place four ammunition dumps throughout each level. This is not obligatory, but you'd be rather silly trading your ammunition supplies for few hundred bonus points. Also throughout the network of plates there are shield generators, which give you immunity to contact with the assassin drones. This is highly desirable,

## May the Fours be with you

The team that created *Incredible Shrinking Sphere*, Fours Field, are a group of four programmers and designers currently working in conjunction with Activision/Electric Dreams. Stefan and Anne Ufnowski, Colin Reed and Steve Green, who form the nucleus of the group, shoulder the entire conceptual and developmental workload, occasionally bringing in outside programmers to work on specific machine conversions.

Stefan has had a long and varied history in the world of games software. He started writing adventures three years ago, producing titles like *Rebel Planet* and the Silver Chalice-winning *Kayleth*. Since then he's worked on the graphics for arcade style games such as US Gold's *Masters of the Universe, Dream Warrior* and *Captain America*. This mixed programming and design background has led directly to the development of *ISS*. 'We were looking for a game with a shoot 'em up element as well as puzzles,' Stefan remembers, 'a game that had as many mental challenges as reflex ones.'

'Working on *ISS* was a very good experience for all the programmers,' says Ann. 'It was one of those rare projects that was all but trouble free from beginning to end.' From the time it was designed to the day it was handed over to the software house for testing, the game took seven months to put together (late February–September 1988).

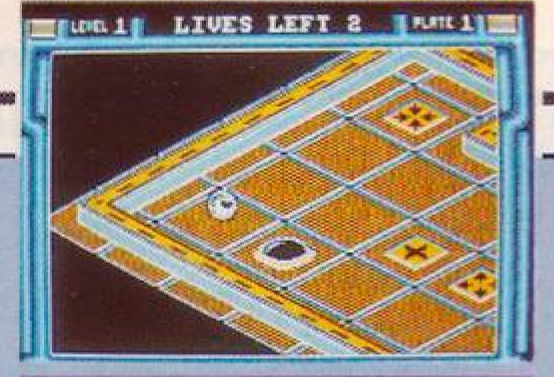
Fours Field's positive feelings about *ISS* stem from their strong sense of team work, with each member of the group contributing at all stages to the development of the game, right from the original design concept up to final game play testing. Their future's so bright (they gotta wear shades): the current project is *Time Scanner*, also for Activision and due for release this month.

● Above, the Fours Field crew, Anna and Stefan Ufnowski, Colin Reed and Steve Green; and left, two of Stefan's previous projects, *Captain America* and *Dream Warrior*



because if they touch you it's Venetian Blinds time (yup curtains).

It's good to see perseverance being rewarded, and with each 50,000 points an extra sphere is gained up to a maximum of seven (chance would be a fine thing!). Points are up for grabs, by shooting assassins, completing levels and passing over reward tiles.



It's a whole new ball game


A shrinking sphere gathers no moss (Sangfalmadorian proverb)

Points are nice, but you must exercise restraint and not to go all out for the reward tiles. Remember the timers run on all the squares. And while you're amassing points your escape route may be decaying, forcing you to sit tight and wait for the world (or at least the floor) literally to fall in around you.

> **SECOND OPINION**
>
> ***"ISS certainly looks the part, and the smooth movement and shiny graphics look impressive enough. It's not as easy to get started as many people would hope, and while that does mean you get more for your money it is discouraging.***
>
> ***"There's lots to do in this game, if you have the interest."*** **SC**
>
> **GREEN SCREEN**
> *Good*

One thing your sphere doesn't like is being told what to do. As you can well imagine, this causes problems when you're trying to avoid prisons, gaping holes in the floor and assassin drones. The sphere veers off to just exactly the wrong angle to avoid that 'rebound booster' and so off you go, flying into everything in your path, completely out of control. Roulette time, and you're the ball! Don't go rushing in, your life is on the line.

Having landed safely (!) on the 'Death Run', the first thing to do is to get tooled up. Shields and bullets are needed if you are to stand any chance of reaching the next level. You land equipped with one magazine (hope it's *AA)* full of ammo, but this soon dwindles once you start to mix it with those assassin spheres without any shields. A photon protection shield can be obtained by finding, and then actually managing to pass above, one of the tiles emblazoned with a coat of arms.

Luckily the shield 'dumps', like the ammunition supplies you drop at the outset of the game, are inexhaustible. They are though prone to decay, so don't get greedy and stay around one place continually topping up the tanks. It's best to shape up and ship out as soon as possible.

Now armed to the teeth, you are ready to seek out the way into the next plate of this level. Most of the mazed areas interconnect, but if you take the long way around you find it impossible to reach the black hole that transports you into the next stage. Yes, I did say black hole. The Chinese use bikes to get from A to B, Londoners use the tube, Sangfalmadorians use black and white holes. So it's quicker than the bus, but which would you choose?

The route becomes obvious after a few circumnavigations of the plate. It's easy to spot: the most difficult way to go between two points. Just head for the smallest corridors, the decayed tiles and the most tightly packed groups of assassin spheres. That way progress lies.

The style of game play does not change much from this original premise, it just evolves and gets ever more complex and tricky (as if controlling the sphere wasn't enough). Moving walls start to appear providing short cuts, or temporarily blocking the way. Ramps replace exits, and these must be taken when the sphere's speed and mass are balanced correctly, or the ramp gives out under the weight. In some instances walls must be charged after building up speed and literally broken through, if you are to continue on your quest for the courageous colonel Ridley.

The combination of simple concept – like a *Pac Man*/pinball crossbreed – and complex gameplay works well, if not perfectly. The graphics, excellent when the action is at a slow pace, become jittery when things hot up, leaving you confused, eyestrained and with a migraine. The sphere is too hard to control, and many a joystick will end its days being wrenched too hard as you sail into danger. It's like trying to control Pac Man after he's had a couple of pints of shandy on a Saturday night.

*Incredible Shrinking Sphere* could never be considered a 'fun' game to play. It is a challenge you find either enthralling or excruciating depending on your mood. The game demands constant attention, because the penalty for losing a sphere is a one way ticket back to the start of the level. And then you get to have all that fun again, yippee!!!


Sphere today – gone tomorrow

Eventually you make it back to base, having rescued the world's most useless Commander in Chief. What you really need is a good sit down and a cuppa. But those nice people at Sphere Corps have a surprise for their conquering hero. You're going back in – and this time, just to stop you getting bored, they've made things tougher. Ah well, such is life. It's a ball really. **TW**

**FIRST DAY TARGET SCORE**
20,000

## The Verdict

**GRAPHICS ........87%**
- ☐ Great at low speed...
- ■ ... jumps around at high.

**SONICS ........79%**
- ☐ Effects are good: tune is pleasant(ish).

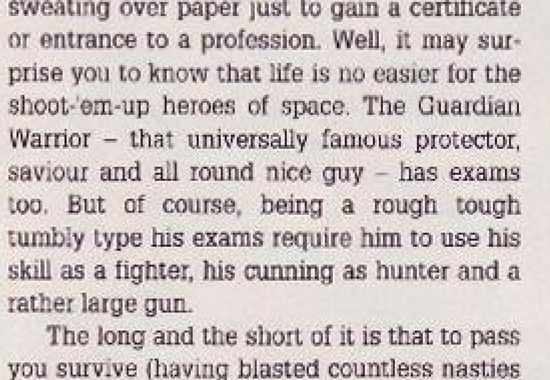
**GRAB FACTOR ........63%**
- ■ Too difficult to pick up instantly.

**STAYING POWER ...81%**
- ■ Finish the main game and you get a newer, nastier one.

**AA RATING 82%**
- ☐ Depth ensures longevity...
- ■ – if you can muster the enthusiasm to find out.

# DARK FUSION

**Gremlin ● £9.99 cass, £14.99 disk joystick**



Exams, don't you just love them? Hours of sweating over paper just to gain a certificate or entrance to a profession. Well, it may surprise you to know that life is no easier for the shoot-'em-up heroes of space. The Guardian Warrior – that universally famous protector, saviour and all round nice guy – has exams too. But of course, being a rough tough tumbly type his exams require him to use his skill as a fighter, his cunning as hunter and a rather large gun.

The long and the short of it is that to pass you survive (having blasted countless nasties en route), and if you fail it's time to go to that great arcade in the sky, where men are sprites and everything else is just asking for trouble. This rather harsh recruitment technique doesn't seem to dampen the enthusiasm of potential Guardian Warriors, who line up by the bucket load to be guided by you on this ultimate test (can you imagine that down here on Earth? One failure at GCSE woodwork and it's a bullet in the brain!).



● Don't count your (headless) chickens!

## SECOND OPINION

***"This is a bit like a Chinese meal. You've just got to have it, but an hour later you wonder why you bothered. And want another one."***

**SC**

**GREEN SCREEN**
***Clearly suitable***

So revision over, it's time to get down to the examination (extermination?) itself. You find your would be Guardian (angel?) wandering along a two way scrolling landscape. The path is littered with obstacles that must be jumped over, shot etc. and a whole host of bug-eyed creatures who want to see you fail and die (not necessarily in that order).

The screen is colourful, the sprites scrolling around smoothly and easily. The cadet under your control is not the best warrior sprite ever seen but he does the business (if you know what I mean Harry). Some of the beasties and things that go bump in the night, however, are highly original, ranging from small bird-like creatures to gigantic headless chickens (it sounds daft but that's what they look like) spitting fire in multiple directions.



● Dark (con)fusion!

Obviously facing such terrifying creatures as forty stone oven-ready poultry means you need some help. This is at hand in the form of the fusion pods, dropped by the aliens when they are zapped. These give your weaponry a much needed boost, bullets that fire upwards, a form of shield and extra lift to the jet pack, to name but a few. These supply drops are few and far between, so it's essential to make sure and collect all the available goodies, for who knows when you'll need the power to jump over a obstruction or to shoot at enemies in four different directions at once.

The basic premise of *Dark Fusion* is not what you'd call Innovationsville Arizona *(whaaa–?! ed.)*, but there are surprising and interesting facets that appear just when you feel that the game may be slipping towards mediocrity. For after walking around a bit, blasting a few things, collecting a few fusion pods, what do you know there's this darned great pillar with an arrow on it in the way! Now whilst ordinary people would shy away from taking a peek, big tough Guardian Warriors can't resist it ('ello 'ello 'ello wot's all this then?).

It's now the game gets interesting, for you are teleported away from the nice safe carnage to an alien sub-world where the enemy are bigger, badder and braver than before. This situation is supposedly evened out, since for this section you are transported to a space ship. Fat chance, these aliens are large, mean hombres and with very little room to move, quick accurate firing is a necessity.

In all of the zones you are to visit, the screen informs you of your state of health, the weapons in use and the power of the shot you are about to release. Take care, however, when collecting weapons pods: you can only use one at a time with one in reserve. Collect any more and you lose the ones you've so carefully saved.

*Dark Fusion* fails in one key respect: despite the generally slow pace of the game, it is too hard to survive early on. It's not that you're destroyed by too many creatures attacking too fast for your trigger finger to cope with: it's just the awkward nature of zones themselves. Your poor little Grauniad (sorry *Guardian)* Warrior is left to the tender mercies of the aliens, all of whom take far too long to dispatch. Indeed many need three or even four high power shots – which again brings the pace of the game down.



● Snakes and lasers



● Astronut prepares to do battle

*Dark Fusion* is a professional and well executed piece of work, every area of the game well planned and presented. The magic that makes a classic, however, is sadly lacking. All that remains is yet another enjoyable blaster battle that joins the already swollen ranks of good but ultimately forgettable shoot outs in space.

**TW**

**FIRST DAY TARGET SCORE**
20,000

## The Verdict

**GRAPHICS ........ 87%**
- □ A solid graphic display.
- ■ Nothing new.

**SONICS ........ 59%**
- □ Great variety of effects.

**GRAB FACTOR ........ 46%**
- ■ Not hard to play exactly – but awkward.

**STAYING POWER ... 67%**
- □ When you learn the tricks, it's possible to do well...
- ■ – but it takes a long, long time.

**AA RATING 68%**
- □ Glossily finished...
- ■ – ultimately unsatisfying.

# PROGRAMMER'S AID TOOLKIT

**from Galeper Soft, 36, Weston Lane, Bridgetown, Totnes, S. Devon, TQ9 5UN**
**Telephone: (0803) 864784**

## The Company

Programmer's Aid Toolkit is the latest in a line of quality utility software for the CPCs from Galeper Soft. So far, since Galeper's first program for the CPC a year ago - POKE-EASY - it has produced POKE-EASY PLUS+ 'The Ultimate Game Hacking Tool' (Reviewed in the February issue) which is £10.99 on Tape, and £15.99 on Disc, BASIC EDITOR V2.0 - £9.99 and £14.99, RSX DESIGNER 2 - £9.99 and £14.99, and WEATHER PREDICTOR costing £11.99 on Tape, £16.99 on Disc. Do yourself a favour and send off for a catalogue and price list!

## The Product.

Programmer's Aid Toolkit is a toolbox of over 70 new commands. Just load the program into the computer with the RUN" command, and from there these comands are at your disposal.

From printer commands to disc commands, graphics commands to whatever, PAT has it all! Each command is preceded by a":" as in the commands with the disc drive and other toolboxes. But these have a difference in that they are REALLY powerful, such as:

- On screen digital clock which keeps time at the top-left of the screen, and stays accurate until you switch the CPC off.
- Printer commands to select NLQ, Double width, underline, etc.
- Sceen commands to underline text, colour in graphics.
- Disc commands to unerase, detact format, copy files. Read/write.
- A super NLQ font for just about any Dot Matrix printer to enable you to produce really smart-looking documents.

There's so much more than this in the 70 odd commands, such as commands used on the BBC micro, and ROM viewing commands, TURBO speed saving. There's even a super-fast screen dump for printers which takes less than a minute to print a screen of text.

And when you've had enough fun incorporating all of these commands into your own programs, just type in the KEYBOARD command, and your CPC is suddenly transferred into a musical keyboard with sharps/flats and legato/staccato touch! You can even imitate a drum with it.

Altogether, the commands load in at around 9000 normally, allowing them to be compatible with the Disc drive and other ROMs unlike some other toolkits that won't work unless all ROMS are unplugged. It is also utterly bugless - which means that it won't crash in operation. It really is user friendly - it is designed so that even the novice can get to grips with it easily.

This is THE toolkit for your CPC. Send off for it straight away!

*Programmer's Aid Toolkit is available by Mail Order enclosing a Cheque/Postal Order to:*
**GALEPER SOFT 36 Weston Lane, Bridgetown, Totnes, S.Devon, TQ9 5UN. Tel:(0803) 864784**

Price: £9.99 on Cassette for the CPC 464 Tape system only. £14.99 on 3" Disc for the 464 + DDI1, 664, or CPC 6128.
***TRADE ENQUIRIES WELCOME!***

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- A class code, one of up to 50 defined by you to suit your circumstances e.g. h0=Household expenses, h1=Mortgage, h2=Rates or p0=Production, p1=Raw materials, p2=Assembly, p3=Packing, etc.
- A description so that you can see what each transaction was for, e.g. "New gearbox" or "Box of 10 discs."
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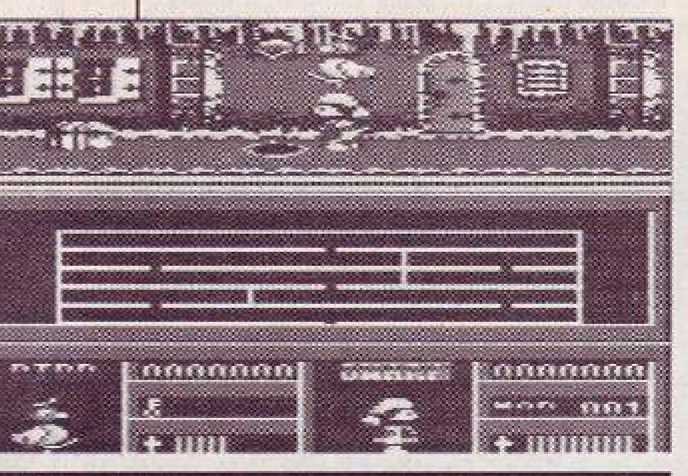
**3 Flanchford Road, London W12 9ND. 01-743 9792 8am-10pm 7 days a week**

VISA

# DYNAMIC DUO

**Firebird ● £8.99 cass, £14.99 disk**
**joystick/keys**

Duo? Definitely. Dynamic? Doubtful. To most of us the 'Dynamic Duo' conjures up images of Batman, Robin and that fiendish funster The Joker. But if you were expecting a jaw-socking adventure in Gotham City you're going to be disappointed. No sirree, this time the underwear is worn *inside* the trousers, and the only bats are on the castle ceiling. For Firebird's latest features the unlikely friendship between a dwarf and a duck – no, seriously – on a rambling treasure hunt through an old haunted castle.



● Hey you! Yeah you, short guy!

This gruesome twosome boldly go where no duck and dwarf have gone before, into the mysterious 'Night House'. What they're after is the calculations room, which contains hidden treasure. To find it, though, they must first recover the ten parts of a key locked in chests throughout the castle. Only then will the phantom rooms disappear and the loot be theirs for the taking (sound like a pair of Tax Inspectors).

The 'Night House' you explore as one or both of the Dynamic Duo is a maze of corridors connected by holes in the floor – reminds me of the *AA* office! – and doors which act as elevators. As you roam these dark and dangerous halls you are pursued by all manner of strange and sinister things, most of which can be killed by the dwarf or munched by the duck.

But – and it's a big but, in fact it's a double decker but – there is one important and nasty exception, namely that arch baddie 'the Grim Reaper' (Jack the Reaper to his friends – or he would be if he had any). He is out to hunt down shortie and the boid, and destroy them before they make off with his savings. – *Hang on a minute, though. It's his money, right? And they want to steal it, right? So how come he's the baddie? Never mind, never mind. Just get on with the game.*

There's three styles of play, the screen display varying with the mode selected. In 'two player' you pick your character and watch a different screen for the progress of your half of the pair. One goes scouting, the other collecting the keys. In 'one player' mode you have the choice of using both duck and dwarf as a team, which rather limits the duck's contribution, or splitting them up. This means you gain in the speed stakes, but leave the dwarf to the tender mercies of the Purple Nasty (no, not *Prince*, the Reaper!).

*Dynamic Duo* is much more difficult and more fun when the duck and the dwarf split up, and both are charging around trying to locate and collect the keys. The dwarf can open treasure chests and shoot enemy guards, while his feathered friend can take to the air and so is faster and safer, but can't collect anything on his own. Team work is the thing, and a good sense of direction to know where the duck saw that last trunk, so the dwarf can come along and collect it. In summary: no problem in the two player mode, but wildly confusing when you're controlling both independently.

Gameplay is quirky, and all the more enjoyable for it. Your rather curious couple are attacked by milk bottles armed with fireworks, for example, levitating eyeballs (real 'eye fliers'?), and a great line in purple boulders. These pretty coloured rocks can be rolled to smash through walls for a spot of DIY (destroy it yourself).

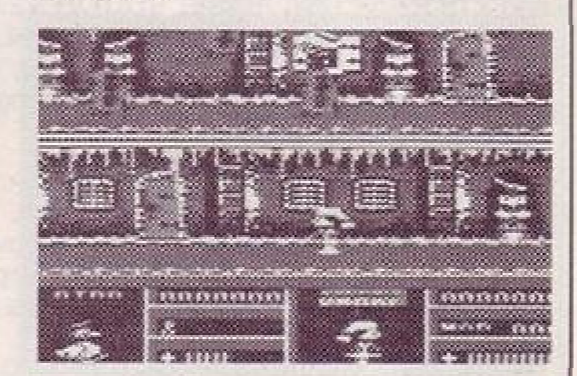
Despite the clever design, however, *Dynamic Duo* is merely pleasant, and falls a good way short of great. Both duck and dwarf are decidedly cute, and give the whole game a cosy, insulated feel. On the other hand, there is no apparent danger, so excitement is lacking. But then evil Mr. Reaper pops up in his purple gear, and it's Game Over and here we go again. With only one life between the two characters, you can run but you can't hide.

● Is it a bird? Well yes, it is actually

*DD* is well illustrated, with interesting, active little sprites and well put together backdrops. Yet pretty pictures can't compensate for the uninspiring nature of the game. It's fun to start with, as you guide the pair around, and the collecting is not difficult to co-ordinate. Then all of a sudden, completely unannounced, surprise surprise, well blow me, strewth, you could have knocked me down with a duck feather, out leaps the Reaper and all is lost – *well* annoying when you've already got nine pieces of key!

Although by rights it should leave you cold, *Dynamic Duo* has its appeal, and after a few hours you find yourself unexpectedly curious about the final stages, the best tactics and so on. The actual execution of the gameplay itself, unfortunately, leaves you frustrated and largely uninterested. Once Reaper avoidance techniques are mastered, it comes down to a question of where the keys are located. Dullsville in technicolour. **TW**

**FIRST DAY TARGET SCORE**
1500 points



● Duck! Where? Behind you! What? Duck! (etc)...

## SECOND OPINION

***"Firebird's latest effort falls between two stools. Like Gremlin's Mickey Mouse the dynamic duo themselves are cute, and should in theory appeal to younger players. But unfortunately the gameplay is way above their heads, and it could well end in tears – or indifference. Reluctantly I'd be inclined to recommend you give this a miss." SC***

***GREEN SCREEN***
*it'll do*

## The Verdict

**GRAPHICS** ........ **82%**
□ A sprite delight.

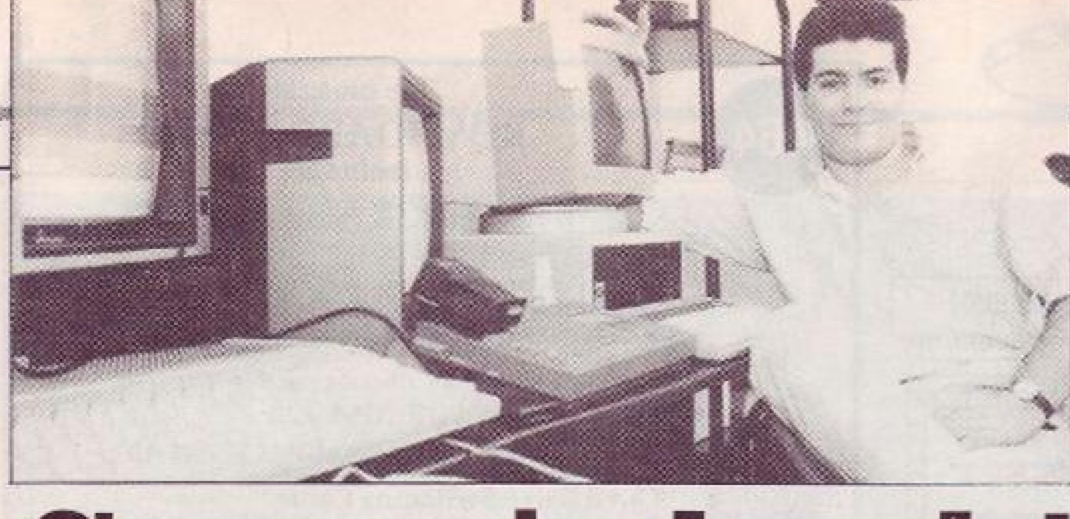
**SONICS** ........ **62%**
□ Constant tune helps the game along
■ – but it's a lousy tune!

**GRAB FACTOR** ........ **64%**
□ Good clean fun to start with...
■ ... then it becomes repetitive clean fun.

**STAYING POWER** ... **51%**
□ Best played sparingly to keep your interest.

**AA RATING** **67%**
□ Entertaining, if never quite enthralling.
■ Different – but at the same time sometimes dull.





# Cecco is back!

**The man behind *Equinox*, *Exolon* and *Cybernoids I* and *II* is back! TRENTON WEBB gets the full story**

Raffaele Cecco is one of the most inspired programmers currently writing games software. His previous games all scored outrageously well in *Action Test*. They have something else in common, too: they were all set in space. *Stormlord*, which takes place in a Tolkienesque fantasy world, thus marks something of a thematic departure for Cecco.

'I've always wanted to to do a game based in a fairy tale setting,' Cecco said. The game is designed to feature some of the same elements of fast action that have made his previous ventures so successful. But it will also have scrolling adventure overtones, with items to be collected and tasks to be completed, as well as the traditional slaying of monsters and foes.

### Cybernoid, too

The game is based on an original idea by Cecco, who not only programmed the game but designed how it would look. Though Hugh Binns was the man responsible for recreating Raff's graphics for the CPC, Cecco retained informal control of the project so all formats would feature his distinctive touch..

*Stormlord* has taken some eight months to complete, largely due to an interruption from an unexpected quarter. 'It has taken longer than I anticipated because in the middle of the project I had to take three months out to work on *Cybernoid II*,' Cecco explains. 'In retrospect I would have preferred not to do *Cybernoid II* at that time.'



● Cecco, whose previous games include *Equinox (AA10, 83%)*, *Exolon (AA24, 93%)* and *Cybernoids I* and *II (AA32, 91% and AA39, 90%)*

Raffaele says that when it was conceived, the sequel was merely an update of the original, but as it was developed, 'it got to the point where there was far too much conceptual work to think about for me to spend time on *Stormlord*.'

After the completion of the second and equally successful *Cybernoid* project, however, work on *Stormlord* has proceeded uninterrupted, and is now almost complete.

Inevitably the question of 'bugs' arises, naturally a cause of concern for both programmers and distributors. The Cecco solution is constant checking and re-checking of every thing written for a game. 'I'm playing the game as I add to or change the program, every five minutes it seems,' Raffaele says. 'By the time the game is ready for delivery to Hewson it must have been played thousands and thousands of times. It's very unlikely that any bugs could pass through undetected, and therefore unremedied.'

### Piece of the justice

Once the game is handed over to its distributor, the influence of the programmer over how it will appear on the shop shelves naturally wanes. Unusually Raff insists on retaining a veto over the packaging and promotional material, if in his estimation it does not do the game justice. (I can only think he's never actually seen the dreadful poster Hewson have produced to promote *Stormlord!*)

> *"I feel better about* [Stormlord] *than any of my other recent projects: it's something I've always wanted to do"*

So now, as you – and we – look forward to a new Cecco work in the next few months, things look good for Hewson and for Raff. The screen shots and demos we've seen are well up to the usual high standard (there's an example in *The Look* on page 49 this month). 'I have to say I feel better about this than any of my other recent projects,' Cecco claims: 'it's something I've always wanted to do.' ●



● Some of Raff's previous projects



● An artist's sketches made for Cecco's work for *Stormlord*. Compare these with finished result (see *The Look* on page 49)

# DAY IN THE LIFE

## The things CPC users get up to!

**This is the story of how TONY GRANT of Format Publicity, a busy public relations consultancy, equipped his company at cut-price, and made the most of the CPC's abilities without splashing out thousands of pounds.**

We first 'went computerised' in late 1984, at a time when the natural choice would have been a single business system costing many thousands of pounds. Instead we took something of a gamble on some new-fangled machines called 'CPCs', giving us three independent systems for a (not so) grand total of £3,200.

### Fast and friendly

We found the easiest WP program to be *Tasword* – and we've tried a few. That means you can use it within 30 minutes or so of first receiving the program. Some of its powerful features take longer to learn but the most important thing is that initial use is quick. I now have memory expanded CPCs with twin disk drives running *Tasword* 6128 in the office and have introduced others to the same program. They too find the program very user friendly and, by the way, like the more 'substantial' feel to the 464 keyboard.



Tony Grant: popular with the company accountant

Apart from the fast acceptability of *Tasword* 6128 it has one important feature lacking from other WP programs – the maximum document size handled at any one time can be nearly three times normal size (that's over 60k of filespace). This feature alone allows us to write proposals, reports, surveys and prospecti without having to sub-divide long documents into several files.

We also use a simple database program (again having tried others). Dean Software's database and mailing list program for the CPC is extremely quick and easy, and it's very unfortunate that it's no longer still available. File sizes on the original program are limited to around 30k, which, for our business, is too small. A modification can be made, however, to exploit the plug-in 64k memory extension available from Ram Electronics (☎ 0252 85031).

This modification is made to the program so it utilises 61k of the expanded memory for single files. We use it for press lists, and with the extended memory we can search through, and set into alphabetical order, files three times the size possible before. That makes the files the same maximum size as *Tasword* 6128. Any readers wishing to increase the capacity of their Dean Software program should contact: John Keneally of Camel Micros (☎ 0392 211892. Mr Keneally is also the author of *WOPS* – a utility program which allows CPC users to utilise the cassette recorder 'Datacorder' in the Amstrad for archiving files. *WOPS* is another of those really easy-to-use programs worth its weight in gold). *(See AA42 – ed.)*

### The bonus of Dean

The bonus of Dean's DB program extended this way and using *Tasword 6128* is that *Tasword* will load files created under the database program. The point of this is that *Tasword* loads faster than *DB80* (Dean's filename for the program when configured for 80 columns of text). And for those smaller alterations to existing data, *Tasword* offers more speed. We don't recommend *Tasword* for adding new entries (unless overwriting an old entry) as you could make a mistake and then the program won't run under *DB80*.

Handling *DB80* changes under *Tasword*, however, and saving back-up disks of altered database information is greatly improved. *Tasword* might be running on the computer for most of the day anyway, so it saves the inconvenience of loading a completely different program. All *DB80* files displayed under *Tasword* have double quotes at the beginning and end of each line. Leave these in place. *DB80* doesn't print them but recognises them as BASIC instructions. Under *Tasword* these quotes would print, so continue using *DB80* for printing, sorting and so on.

### CPC 'network'

There you have it:

1) *Tasword* is a fast-to-learn WP package especially ideal for computer illiterates like me. It has bags of filespace and handles documents three times the size of other CPC or 6128 based WP programs.

ii) Expanding the memory of the CPC 464 by 64k (or using the 6128) means you can run *Tasword* 6128 and, if you contact Camel Micros, you can treble the file size handled by Dean Software's database program.

iii) *Tasword 6128* can be used to fast load *DB80* files, speed up the process of altering existing entries and fast save updated files for back-up. Just the job if you mainly keep *Tasword* loaded during the day anyway. *Tasword* also warns of insufficient disc space and gives you the option of deleting back-up files to make room. Under *DB80*, if you save onto a full disk, the program crashes.



Stan Laurel watches over Format's £3,200 'network'

iv) Apart from many other features like reinstating a file deleted from disk by mistake, the *WOPS* utility program from Camel Micros allows CPC users to archive important files onto the computer's integral cassette recorder. All you need are good quality ferrous oxide C60 or C90 audio tapes. We've found the TDK brand to be very reliable.

Of course, more powerful computers with large built-in memories and powerful associated software provide the aforementioned features standing on their heads. That's not the point. If you've already bought a computer and have disks full of information you just don't go out chopping and changing your hardware all the time.

When you combine this with the attractive initial price of Amstrad computers and associated software, you have a strong argument for enhancing what you've got. We have three 464s and one 6128, six disk drives, two expanded memories, 2 daisywheel and three dot matrix printers plus software – all for less capital cost than one, long-established dedicated word processor with printer – the best available when we first bought a CPC in 1984.

Our ageing Amstrads are still going strong, but if one should fail we can still use the other machines; if a printer goes down we still have others to turn to – a sort of network, all for less money than buying one dedicated machine four years ago.

# THE LOOK

## CPC graphics – let PAT McDONALD brighten up your life!

OK guys'n'gals, here's where *you* get to do something. Included in this month's *Type-Ins* is a program with which you can create your own designs for the game – or utility! – of the year.

To follow will be a set of routines that let you animate your designs by using simple Basic RSX commands. That story must wait awhile, but in the meantime you can get on with designing the pictures.

The full instructions on the controls to the sprite editor are included with it in *Type-Ins*. What follows is a down to earth explanation that draws on previous *Looks* to explain just what it can and can't be used for.

For a start, the number of sprites available is 16, ranging from 0-15. This order has nothing to do with the priority of the sprites. When two sprites overlap, the one to be overlayed on top of the other is completely up to you.

Space is allocated for them at the top of memory – you shouldn't need to unplug any ROMboards or similar memory grabbers. When you are drawing sprites, start with the highest (15) and work down. That way, if you decide to not use any sprites, the memory can be re-used.

(Remember that the program had to be short enough to fit into *Type-Ins*, and so isn't as friendly as it could be. If (when) you come up with any improvments, by all means send them to our new *Forum* section.)

### Quick on the draw

Before you can draw or edit sprites, you must select the correct palette of graphic modes and pen colours. You input these using the options, and SAVE them onto tape or disk. Next time you do some editing, just load your palette – saves you doing the mundane task over and over.

Drawing sprites is not difficult, given time and patience. Changing pen colours and moving about the screen is easy, although some-

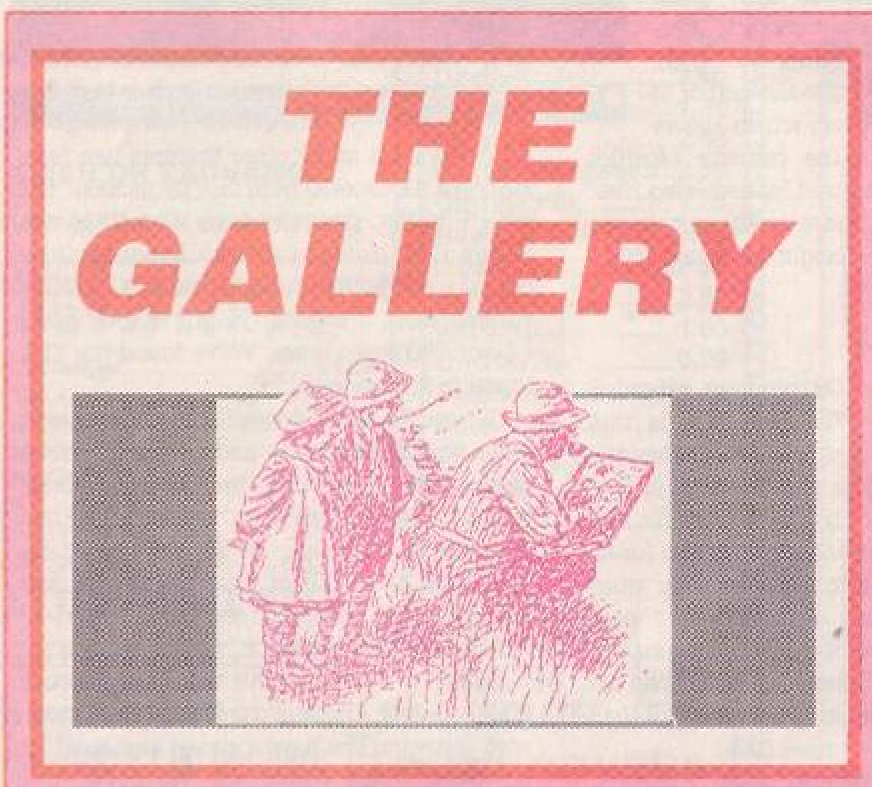
## Looks so incredibly sexy!

'Why go to all this effort?' In home computer programming the importance of presentation cannot be overemphasised. Your product can be very effective, behaving in a friendly manner and be easy to learn. But will it be popular?

Take that program to somebody who's never seen it before, and they'll be more impressed with an eye catching display than with reams and reams of closely printed text.

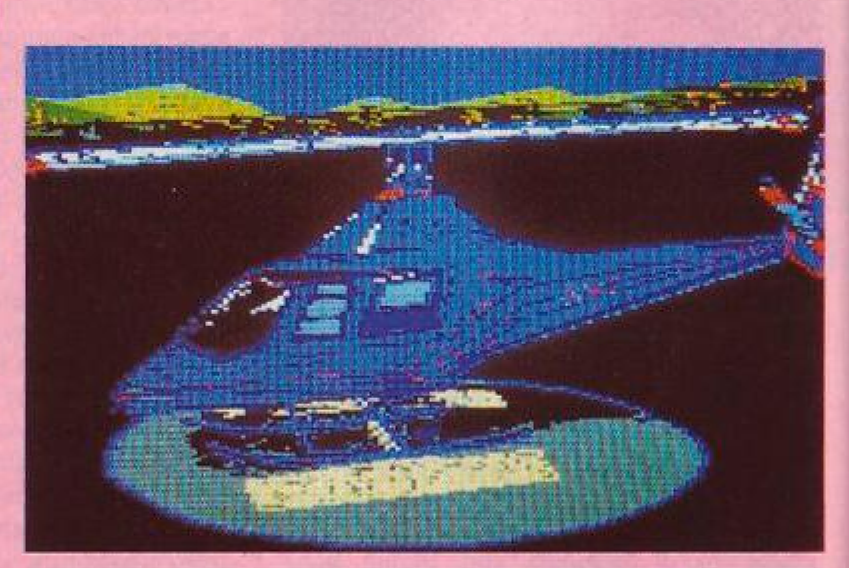
Why shouldn't utilities look 'sexy'? Most people who have a home computer can't program it, and feel very uneasy using a new piece of software. If computer programs are more attractive to them, then they'll spend time learning how to use them.

It's at that stage that presentation becomes relevant. 'Get a snappy headline McDonald!' as a certain ed would say.Satisfied? *(I'm never satisfied – ed.)*




£20

● Dean Kemp of Walsall created this haunting picture with *Smart II*. It's so smart, in fact, that it earns him a cheque for £20! Nice work, Dean



● *Smart II* is popular with Brum's AC Foster. A nicely proportioned picture

● Fancy yourself as an artist? Then get cracking! Let us have your very best work at the *AA* office, and you could earn yourself £20! Send entries – together with a short note telling us which art package you used, and an SAE if you want the pictures back – on disk or tape to:

Pat McDonald's *The Look*
*Amstrad Action*
Future Publishing
4 Queen St
Bath BA1 1EJ

times DELETE needs to be used for ink changes. I recommend having at least a copy of the image in front of you. Better still have a graph paper 'pixel' sketch, and fill in the dots from that.

## Warning!

To finish an editing session, press SPACE a couple of times. You'll be prompted to enter a sprite number to save the image to. Entering a value above 15 ditches the image. Warning! Pressing **RETURN** puts in a value of zero, overwriting that sprite area. If you have followed my advice and started at the high numbered sprites, this shouldn't prove a problem. That one will be the last you do anyway.

The **SYMBOL AFTER** 32 statement at line 40 has been put in to allow you to use special character symbols you may have redesigned. For those who aren't too sure what this is, it will be covered in a future *Look*. Anyway, a side effect of this is that the program won't reRUN. Enter **GOTO 60** to restart.

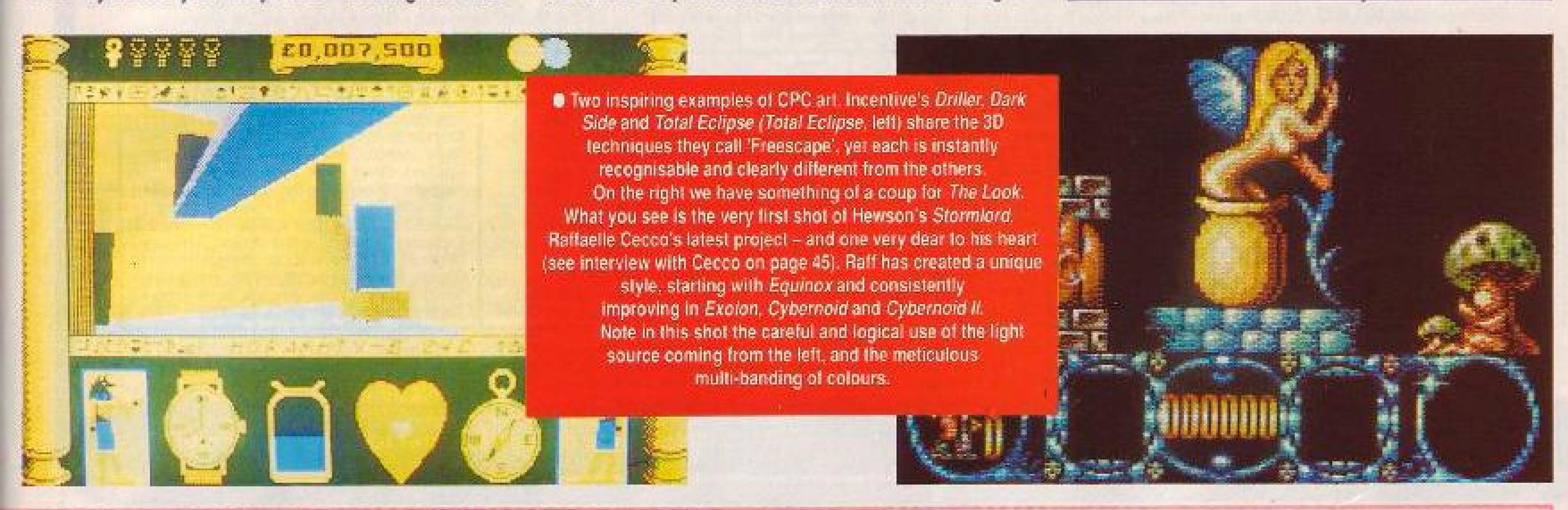
## Graphic design

Concentrate on producing a few colourful images, rather than lots of dull ones. Use of colour is the primary decision for graphics: are you writing an aeroplane game, with lots of blue and white? Perhaps an easy on the eye utility – I prefer orange on black for that sort of thing. Colour is very important, mainly because if you want to change one, you'll find all of the others look different.

When you find yourself slightly limited on colours, don't be afraid to compromise. No room for black? Try a dark blue instead. The mixing of colours and the way they combine on a picture is described as the 'texture'. A well textured screen is always be more attractive than a plain one, no matter how bright the colours are.

My final note on graphics concerns people with green screen monitors. It's true to say that some colours, which look fine on colour screens, just never register as anything other than black on green systems. The way out of the dilemma is to include an option to let the user select their own set of colours, quite apart from what your program starts up with. ●

● Next month in *The Look* we develop the theme of design, examining the CPC's inbuilt graphic features, as well as the capabilities of *AA Sprites*. Don't miss it!



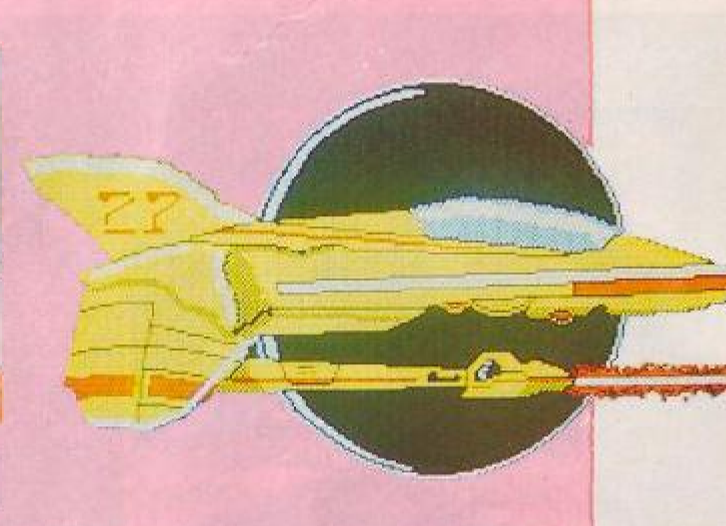

● Two inspiring examples of CPC art. Incentive's *Driller, Dark Side* and *Total Eclipse (Total Eclipse, left)* share the 3D techniques they call 'Freescape', yet each is instantly recognisable and clearly different from the others.
On the right we have something of a coup for *The Look*. What you see is the very first shot of Hewson's *Stormlord*, Raffaelle Cecco's latest project – and one very dear to his heart (see interview with Cecco on page 45). Raff has created a unique style, starting with *Equinox* and consistently improving in *Exolon*, *Cybernoid* and *Cybernoid II*.
Note in this shot the careful and logical use of the light source coming from the left, and the meticulous multi-banding of colours.



● AC Foster strikes again – great seascape, mate




● Daniel Sutton of Solihull uses *AMX Art*. Excellent stuff



● Daniel Sutton again, this time with a less stylised picture



● Lots of detail on this Ninja from Pontypridd's Andrew Kemp. Amazing what you can do with *Advanced Art Studio* – and a bit of artistic talent, of course!



● Karl Stokes spends hours on *GAC* in Osset. A worthy effort




● And AC Foster's last (but not least) entry




## Assemble one last time with RICHARD MONTEIRO

**No flap register this month as promised – sorry to disappoint. Instead for our very last outing ever (knew you'd be disappointed) it's the flag register and conditional jumps**

In Grand Prix racing the flagmaster occasionally swirls a flag when certain conditions are met. The same is true of the Z80 processor. The Z80 won't rush out onto a track and wave a flag frantically, but instead it places either a zero or a one in a certain location when particular things happen.

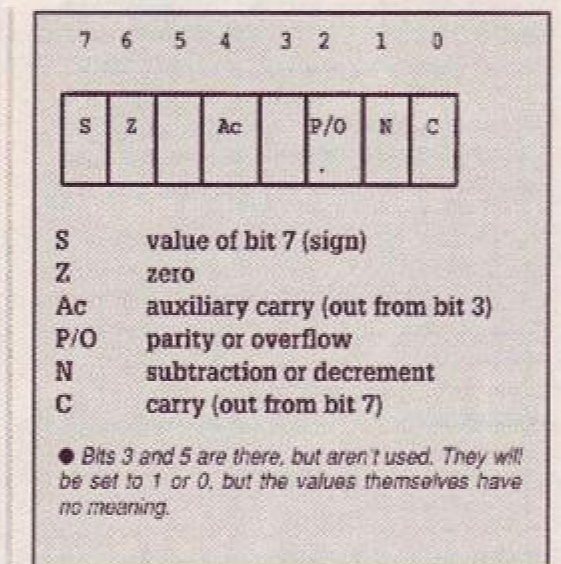
The flag register isn't like traditional registers in that it can't be read or written directly. It is a collection of separate bits, each entirely independent of the other. It is part of the processor control circuitry keeping tabs on the status of the machine. It does this by automatically setting or resetting various flags according to the results of certain instructions *(see diagram)*.

The carry bit assumes a dual role. First it is used to indicate whether an addition or subtraction operation has resulted in a carry (or borrow). Second, it is used as a ninth bit in the case of shift and rotate operations. Using a single bit to perform both roles facilitates some operations – multiplication, for instance.

Not normally of any use to the programmer is the subtraction/decrement flag. This is used by the system during BCD (binary coded decimal) operations.

The parity/overflow flag performs two different functions. Specific instructions set or reset this flag depending on the parity of the result – parity is determined by counting the total number of ones in the result. If this number is odd the parity bit is set to 0 (odd parity). If it is even the parity bit is set to 1 (even). Parity is most often used on blocks of characters (usually Ascii). The parity bit is an additional bit which is added to the 7-bit code representing the character in order to verify the integrity of data which has been stored in a memory device. For example, if one bit in the code representing the character is changed by accident – because of a malfunction in magnetic media, RAM or during transmission – then the total number of ones in the 7-bit code are changed.

A carry from bit 3 to bit 4 is registered by the half-carry (auxiliary carry) flag. The half-carry represents a carry from low-order nibble (group of 4 bits) to high-order nibble.




*● Bits 3 and 5 are there, but aren't used. They will be set to 1 or 0, but the values themselves have no meaning.*

The Z flag is used to indicate whether the value of a byte which has been computed, or is being transferred, is zero. It is also used with comparison instructions to indicate a match. If an operation results in zero then the Z bit is set to 1, otherwise Z is 0. If a comparison is successful – that is, a match is found – then the Z bit is set to 1. Failure results in the Z bit being set to 0.

Any operation resulting in bit 7 being set also results in the setting of the sign flag (S).

### Favourable conditions

Flag bits are used to automatically detect situations within the microprocessor. They can be conveniently tested by specialised instructions, so that specific action can be taken in response to the condition detected.

A branch instruction is an instruction which causes a forced branching to a specified program address. It changes the normal flow of execution of the program from a sequential mode into one where a different segment of the program is suddenly executed.

Think of Basic's GOTO and GOSUB instructions and you'll have a good idea of what branching is all about. Jumps may be conditional or unconditional. An unconditional jump is one in which the branching occurs to a specific address regardless.

After performing some arithmetic or logical process it is often necessary to test some register, usually the accumulator, for zero. If a segment of code is to be skipped only to be restarted at a location called 'cont' then flag status is tested as follows:

- To test for zero use `JR Z,cont`
- To test for non zero use `JR NZ,cont`

Typical code with a jump instruction:

```
LD A,(number)
AND A
JR Z,cont
....
....
....
cont:
LD HL,2345
```

**● Well folks, that completes the current series of *First Bytes*. Truth is, I'm off to edit Future's *Format ST/Amiga*, which won't leave me much time for anything else, unfortunately. Thanks for having me, I must say I – *(gerroff – ed.)***

## Round and round we go

**Loops are common structures that can be either upcounting or downcounting. A loop performs a repetitive process and consists of the loop control counter for defining the number of times the loop revolves, the actual process and the end of loop test.**

**For simplicity the process within the loop in the following example simply displays the asterisk (*) character on screen. In practice, of course, the process can be lengthy and complex to the extent that there are loops within loops. Assemble this routine to memory address &8000 and then type CALL &8000 from Basic:**

```
      ORG &8000
loop: CALL &BB09      ;waits for a keypress
      CP 13           ;compares with 13 (Return)
      JR Z,exit;      ;if 13 jump exit
      LD A,"*"        ;otherwise print *
      CALL &BB5A      ;print routine
      JR loop         ; jump to loop
exit: RET             ; return to Basic
```

**There are one or two things here you haven't learnt yet. For instance, CALL &BB09 is a firmware routine that waits for a keypress before continuing. The character value is placed in the A register. CP x (as in CP 13 above) compares whatever is held in the A register with the value x. The zero flag is set if the comparison succeeds. Finally, the JR x instructions force a branch to location x.**




## NEW ENTRIES

Help on disk drives, printers, Protext, disk backup, tape to disk Multiface and tape loading problems
**Someone from Thanet who forgot a vital bit of information: name and address!**

New 6128 owner seeks penpals
**Murdok, 149 Malvern Crescent, Darlington, Co Durham DL3 9UN ☎ 0325 359911**

Will print listings & screens 10p per page, send tape/disk. Help on AA Studio, Tasword, DMP2000, DKTronics Speech ROM, customising cassette recorders/ joysticks/computers etc.
**David Carter, 28 Mt Hermon Rd, Woking Surrey GU22 7UH**

Penpal wanted to share tips and pokes
**Iain Thomson, 13 Millhill Ave, Kilmaurs, Kilmarnock, Ayrshire, Scotland KA3 2TA**

Maps, tips, codes, pokes on over 250 games, AMX Stop Press. Penpals wanted!
**Jay Redfern, 10 Oaktree Close, Mansfield, Notts NG18 3EN**

Tips & cheats (no pokes) on Asphalt, Get Dexter I&II, Dizzy, Wizball, Ghosthunters, Super Stuntman, Grand Prix Sim, Super Robin Hood, Sorcery +, Green Beret, Driller. SAE & 10p per game
**Alistair London, Maryfield, Strath-martine, Dundee, DD3 OPW**

Ireland only: utilities: disassembler, real time clock, disk search, 6128 extra memory commands. All m/c. Send tape/disk & padded SAE to
**D.J.Daly, 'Amber Pines', Annmount, Glounthaune, Cork, Eire**

Tape to disk, 464 loading problems, CPC firmware and hardware, disk drive problems, Multiface Two, Hackit (Siren), 6128 tape recorders, Epson compatible printers, simple M/C, computer repairs. And penpals, m/f, over 15 please for 19yo
**Rob Scott, 22 North St, Leatherhead, Surrey, KT 227AT ☎ 0372 377443 6.30-11pm except Sunday**

Penpal wanted, all letters answered
**John Mullen, 62 Lonsdale St, Workington, Cumbria CA14 2YD**

Robocop, Op Wolf, Guerilla War, Return of Jedi, Savage; basic programming & hacking. Owns 6128 & Multiface II. Penpals wanted
**Stuart Locock, 70 Scott Close, Lichfield, Staffs WS14 9DB**

Listings printed for just 25p per page. Send tape (no disks) containing listing and SAE
**Nicholas Butcher, 116 Upper Hale Rd, Farnham, Surrey GU9 OJH**

Hints, tips on most games & various pokes. Send SAE & 30p per game, 45p if you want it typedy.
**Keith Meakings & WW (who? – ed.), Corner Cottage, 15 Old St, Hill Head, Fareham, PO14 3HT**

19yo 6128 owner wants penpal who can program M/C so he can learn
**John Mullen, 62 Lonsdale St, Workington, Cumbria, CA14 2YD**

Amateur radio & PD software (write first), electronics, ROMs, power supplies
**J.M.Dunnett G4RGA, 5 Queens Rd, Wellington, Somerset TA21 9AW. ☎ 082347 4911**

Tips, pokes, maps for Rebelstar, Xcel, Magic Knight Trilogy, Equinox, Zoids, Antiriad, Sentinel, Aliens, Mercenary, Tau Ceti, MGT, Dragon's Lair, Icon Jon, Nether Earth, VB Cave Adventure, asking for help on Zombi, Driller
**Steve McClay (no Steve, we haven't forgotten you!), 32 Lycett Rd, Wallasey, Merseyside, L44 2DA**

Anyone got an *AA18* they're willing to part with? Poor old Debbie can't get hold of one – it's out of print. (We did look in the office for one for you, Debbie: no luck.)
**Debbie Bainbridge, 16 George St, Ystrad Mynach, Hengoed, Mid-Glamorgan CF8 7BJ**

Renegade, FMI&II, Superstuntman & about 8 trillion others
**Richard Ruane, 97 Cobden St, Darlington, Co Durham DL1 4JD ☎ 0325 58745**

Brunword, printers.
**M Catton, 11 Battery Close, Gosport PO12 4PA ☎ 0705 585764**

Hitchhikers, Tasword, some BASIC, Matchday II, Pagemaker
**Ben Taylor, 5 Hope St, Old Glossop, Derbyshire SK13 9SB ☎ 04574 62023 between 4-6.30pm only**

Penpals please! (Good luck with the A levels – Steve)
**Paul Scott, 13 Kiln Crescent, Bishop Middleham, Co Durham DL17 9AP**

Tips on Dizzy, Grand Prix Rally II, Superstuntman and loads more. Cheat Modes 25p & sae per order. 464 only.
**K. Gillard, 80 Wentbridge Rd, Bolton, Gtr. Manchester BL1 2QR ☎ 0204 399198**

The reach out collection: 10 good games: Art Studio, Ace Test, Reach Out & others. Send £1 & sae & disc
**Rowan Griffin, 6 Charles Rd, Frome, Somerset, BA11 1NT ☎ 0373 63389**

Hints/pokes Gauntlet, Gryzor, Ikari Warriors, Super Stuntman & others
**Alex Henshall, 44 Badger Rd, Tytherington, Macclesfield, Cheshire SK10 2EP ☎ 0625 25690**

Help on Basic programming, DMP 2000, short machine code routines (workarounds), soldering on articles, readers' ideas for type-ins &c
**Rafe Aldridge, ☎ 01 505 5600**

Sheets of pokes for over 70 top games for use with Multiface. Send large SAE
**Stephen Trimmer, 24 Vale Rd, Broadstairs, Kent CT10 2JQ**

De-bug Basic programs, help with m/code. Send tape & listing if short prog.
**Andrew Price, 48 Lockington Crescent, Dunstable, Beds, LU5 4SU ☎ 0582 609533. Hope you like your new house Andrew! – ed.**

Football Games, Basic, type ins, adventure programming, Multiface II, debugging basic programs
**Adrian Sill, 19 Sherwood Dv, 5 Lane Ends, Skellow, Doncaster, S Yorks DN6 8NY**

Grand Prix Simulator, Who Dares Wins 2, Speed King, Paperboy etc. plus pokes, maps, trillions of programs and help with Basic and machine code.
**Steven Flynn, 76 Dunlop Rd, Tilbury, Essex RM18 7AU**

Oblivion, Locomotion, One Man + his Droid, Army Moves, Space Harrier, Project Volcano, Thunderzone, Gunstar.
**James (11) ☎ (0458) 73926**

Millions of pokes, maps, tips etc. Send SAE for full list
**Scott Paterson (got it right now, we hope Scott!), 8 Moor Lane, Thornton, Liverpool L23 4TW**

AA type-ins, Basic, DMP 2000, Adventure programming, Laser Basic, screen dumps, most football games.
**Adrian Sill, 19 Sherwood Drive, 5 Lane Ends, Skellow, Doncaster, South Yorkshire DN6 8NY**

Raid, 180, Star Raiders II, Beach Head II, Death Wake, Sir Lancelot, Footballer of the Year, Nonterraqueous, SD Snooker, GP Simulator, Leaderboard, Desert Fox, Aliens, Champ Basket/Baseball
**Michael Dickinson, 281 Tyldesley Road, Atherton, M29 9AL**

Loadsagames.
**Craig Thomson. ☎ (0698) 51177**

Solving Basic bug, most machine code programs. Enclose listing + description of program + ) If poss enclose cassette with program on 464 only. If machine code enclose assembler listing.
**Paul Jones, 78 Fitzwilliam Street, Swinton, Rotherham, S.Yorkshire, S64 8RW**

Redzone, Ghosts and Goblins, Knight Tyme, Dragons Lair, Green Beret, Gauntlet, Feud, Starquake (codes).
**David Brooke, 8 Birkby Grove, Bilton Grange, Hull, HU9 4PZ**

Basic programming, some machine code.
**Paul Bower, Elm Gable, Hermitage, Newbury, Berks. RG16 9SA. ☎ (0635) 200891 ●**

**Feeling helpful? Just send your name, address, phone number (say if you don't want it printed) and subjects on which you're offering help to: *Helpline*, Amstrad Action, 4 Queen Street, Bath, BA1 1EJ. Write on a postcard/back of a stuck down envelope and keep it short or you won't get in (or you'll get cut to 'loadsagames').**

**If you want help contact the appropriate Helpliner – not us. By post include a self-addressed, stamped envelope for the reply – or you won't get one. And phone only in decent hours!**

**Piracy is not welcome: don't try it, you'll get booted off. Keep it legal. And if you receive SAE's, for heaven's sake return them with some acknowledgement. If you want to come off *Helpline* write and say so.**

# ABSOLUTE BEGINNERS

## Basic for beginners with ANDY WILTON

**A is for the amazing things you can do in our Basic tutorial – such as subroutines that call subroutines...**

Put line 190 back into the program we did last month, and type in these new lines 10–185:

```
100 east=100:north=50:size=20:CLS
105 'Draws left side
110 GOSUB 200
115 north=north+size:GOSUB 200
120 north=north+size:GOSUB 200
125 'Left slope
130 north=north+size:
   east=east+size:GOSUB 200
135 north=north+size:
   east=east+size:GOSUB 200
140 'Right slope
145 north=north-
size:east=east+size:GOSUB 200
150 north=north-size:east=
   east+size:GOSUB 200
155 'Right side
160 north=north-size:GOSUB 200
165 north=north-size:GOSUB 200
170 'Cross-piece
175 north=north+size:
   east=east-size:GOSUB 200
180 east=east-size:GOSUB 200
185 east=eaast-size:GOSUB 200
```

The lines starting with apostrophes are *comment lines*. They're there so that people reading the listing can work out which bits of the program do what. They're messages for human beings, though, not computers and aren't recognised or acted upon when the program runs. Whenever you're writing a big program you should use comment lines. (And anything you save to cassette or disk should have a few comment lines added to its beginning, so that six months later you can remember what on earth the program was for!) Without comment lines, you'll find that by the time you've got to the end you can't remember how the beginning works.

You can type the apostrophe, by the way, by holding down Shift and hitting the 7 key.

When you run the program you'll see it draws 12 squares in the shape of the letter 'A'. The main program calls the square-drawing subroutine 12 times to do this. You could use more squares to make a more detailed 'A' – there's no limit to how many times you can call a subroutine.

### Subroutines that call subroutines

Just as FOR-NEXT or WHILE-WEND loops can perfectly well contain looping commands, so subroutines can contain GOSUBS. Save this current program to tape or disk – with comments, remember! – and type this one in:

```
10 PRINT "Line 10"
20 GOSUB 50
30 PRINTT "Line 30"
40 END
50 PRINT "Line 50"
60 GOSUB 90
70 PRINT "Line 70"
80 RETURN
90 PRINT "Line 90"
100 RETURN
```

When you run it you'll get a whole load of 'line such-and-such' messages which should make clear how this subroutine-calling-subroutine business works. Notice in particular what happens when the program gets to line 100.

The GOSUB commands in lines 20 and 60 both act as 'reminders' to that point, so that the program can RETURN there at the end of the subroutine. The obvious question is, which GOSUB do we go back to when we reach a RETURN command for the first time in line 100?

As you'll see if you run the program, we actually go back to line 60 rather than line 20. We do get back to line 20 eventually, but only once we've reached the RETURN in line 80. The rule is this: the RETURN at the end of a subroutine sends the CPC back to the GOSUB that called that particular subroutine.

The subroutine starting at line 50 is called from line 20, so that's where its RETURN – the line 80 one – sends the CPC back to. The line 90 subroutine on the other hand is called from line 60, so its RETURN – the one in line 100 – sends us back there.

Reload the 'A'-drawing program you saved a few minutes ago, and list it. Notice how line 250 has to RETURN to a different GOSUB each of 12 times. It can do this because the program remembers the position of each GOSUB as it performs it, so we always finds our way back to the right one.

RETURN isn't paired with a particular GOSUB the way FOR and NEXT or WHILE and WEND are joined – if it's just been called by the GOSUB in line 120, the subroutine goes back to line 120 when it's finished. The same goes for any other GOSUB that calls the subroutine – if we just came from line 160, that's where the RETURN will send us back to.

Now for a quick switch-around. If you type in these lines you'll turn that 'A'-drawing program into a subroutine for a larger program:

```
10 size=40:CLS
20 north=50:east=100:GOSUB 105
30 north=50:east=340:GOSUB 105
100 END
190 RETURN
```

This produces an important message, as well as demonstrating how easily simple programs can be turned into subroutines for larger, more powerful programs.

### One last subroutine trick

We've already seen how programs can be built out of subroutines within subroutines, gradually adding outer layers to the program. What started as a square-drawing program became a subroutine in an 'A'-drawing program. This then became an 'A'-drawing subroutine in an 'AA'-drawing program. By repeating this process you can produce complex and really useful Basic masterpieces.

Once you've done that, you can completely change the effect of these vast programs by making tiny changes to the innermost subroutines. Delete 230 and edit 220 to read:

```
220 DRAW east + size/2, north + size, 1
```

Now the line-200 subroutine draws triangles rather than squares.

This means that the line-105 subroutine builds 'A's out of triangles, and so the whole program produces a triangular, rather than a square, 'SS' message. ●

**Next month we reach the end of the current series by unravelling strings. Don't worry, though: *Absolute Beginners* is not dead yet – there's much more to come! Watch this space...**


## Summary

**The GOSUB command sends the program off to obey a group of program commands elsewhere, and come back afterwards. GOSUB takes one operand, which is the number of the line it's sending the program off to.**

**The extra, out-of-sequence lines which GOSUB make the program obey form a subroutine. The end of a routine is marked by the command RETURN, telling the program to go back to the GOSUB command which called the subroutine.**

**Subroutines should be performed only when instructed to by a GOSUB. If the program meets the RETURN command when it hasn't been sent to the subroutine by a GOSUB, it says, 'Unexpected RETURN' and stops.**

**To avoid this, put subroutines after the main program and separate them from it with an END command. END means 'stop performing program lines and put up the "Ready" prompt': it won't try performing subroutines as if they were part of the main program.**

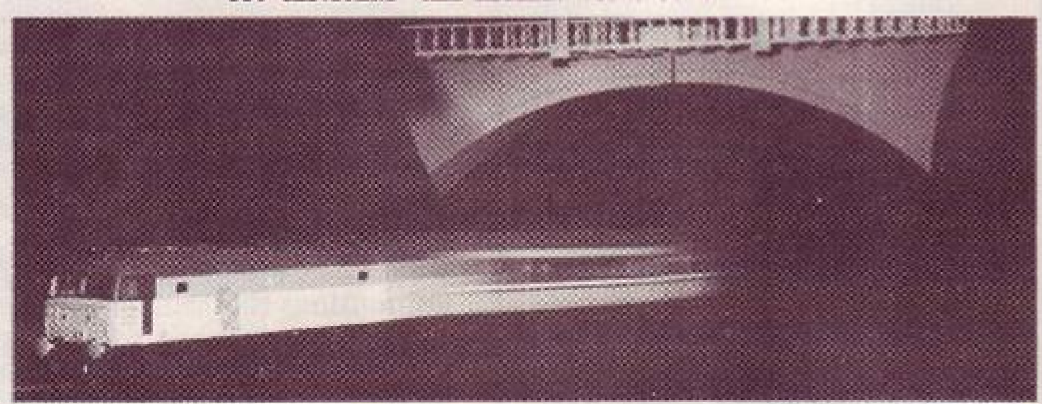
# TYPE-INS

## Listings to help you breathe more easily: PAT McDonald calls the tunes

# Train simulator

**Here's a novel little listing that harks back to the glorious days of rail travel. If Coldmonsters had got hold of this listing, they'd slap *Steam Train Simulator* on it and charge £2.99 a throw. Aren't you lucky that JAMES DIXON of Manchester sent it in to *Type-Ins* instead?**

```
1 'Steam Engine
2 'By James Dixon
3 'Amstrad Action April 1989
10 BORDER 0:INK 0,0:MODE 1:INK 1,26:PEN 1
20 REM Whistle sound
30 FOR g=0 TO 1
40 SOUND 1,30,100,15:SOUND 2,27,100,15
50 NEXT
60 PRINT "WHISTLE!!":PRINT
70 REM Piston Sound
80 FOR s=15 TO 3 STEP -1
90 SOUND 1,1,25,s,,,1
100 NEXT
110 SOUND 1,1,50,15,,,30:SOUND 1,1,20,15,,,30
120 FOR e=25 TO 5 STEP -1
130 REM Engine Acceleration
140 SOUND 1,1,e,15,,,30
150 SOUND 1,1,e,15,,,31
160 PRINT "CHUG ";
170 SOUND 1,1,3*e,15,,,1
180 NEXT
190 SOUND 1,1,e,15,,,30:SOUND 1,1,e,15,,,31:SOUND
    1,1,e,15,,,1:SOUND 1,1,e,15,,,1:SOUND 1,1,e,15
    ,,,1:PRINT "CHUG ";:chugs=chugs+1
200 IF chugs=70 THEN 210 ELSE 190
210 IF e=1 THEN GOTO 270 ELSE e=e-1:chugs=0:FOR
    g=0 TO 1
220 SOUND 1,30,100,15:SOUND 2,27,100,15
230 NEXT
240 PRINT "WHISTLE!!";
250 GOTO 190
260 REM Engine Slowing Down
270 FOR e=1 TO 20
280 SOUND 1,1,e,15,,,30
290 PRINT "CHUG ";
300 SOUND 1,1,3*e,15,,,1
310 NEXT
320 FOR s=15 TO 3 STEP -1
330 SOUND 1,1,25,s,,,1
340 NEXT
350 CLS:PRINT "All Aboard!":GOTO 30
```



# A litter of CATS!

Looking through a back issue of *AA*, R. J. KEY of King's Lynn noticed a program by J. N. Macklin to print disk catalogues. 'But what about doing more than one disk at a time?' he wondered. And so here's the all-new CAT#8 program to enable everyone to record what's on their disks.

It's easy to use: just insert a disk and press R. Once the computer has read the information, it prompts you for a disk number and side, and then prints out the whole lot. No problem!

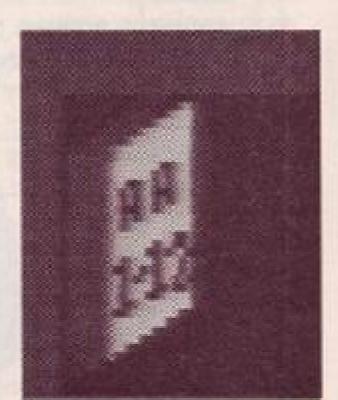
```
10 REM CAT#8
20 REM by J N Macklin (modified from AA10)
30 REM Amstrad Action April 1989
110 CLS:LOCATE 1,2
120 PRINT"Insert disk to be catalogued and press R"
130 R$=INKEY$:IF R$="" THEN 130
140 IF R$="R" OR R$="r"THEN 150
150 z=3:p$="":t$="":u$="":MODE 2:CAT
160 INPUT "Disk No  ";n
170 INPUT "Side No  ";a$
180 WHILE p$<>" ":z=z+1:LOCATE 1,z:GOSUB 310:WEND
190 FOR x=1 TO 16:LOCATE x,2:GOSUB 310:t$=t$+p$
    :NEXT
200 FOR x=1 TO 9:LOCATE x,z+1:GOSUB 310:u$=u$+p$
    :NEXT
210 GOSUB 320:PRINT #8," CATALOGUE";TAB(33);t$;
    TAB(70);u$:GOSUB 320
220 PRINT #8," Disk No:  ";n;TAB(33);"Side No:  "
    ;a$:GOSUB 320
230 FOR y=4 TO z-1:FOR x=1 TO 80
240 LOCATE x,y:GOSUB 310:v$=v$+p$:NEXT
250 PRINT#8,v$:v$="":NEXT
260 GOSUB 320
270 CLS:LOCATE 2,20
280 INPUT "Catalogue another disk  Y/N  ";Y$
290 IF Y$="Y" OR Y$="y" THEN 110 ELSE 300
300 MODE 1:END
310 p$=COPYCHR$(#0):RETURN
320 PRINT#8,STRING$(80,"-"):RETURN
```

```
CATALOGUE                          Drive A: user  0                   61K fr
--------------------------------------------------------------------------------
Disc No:   14                      Side No:  B
--------------------------------------------------------------------------------
ABST     .ASC   3K   FIRST    .        7K   PRINTERS.43     8K   TYPEINS .43   14
AMSCENE  .43    3K   HARDCAT .ASC      2K   PRINTERS.BAK    8K   WHIS1   .BAS   7
AMSCENE  .BAK   3K   HOMEWTER.43       6K   RAMBUFF1.      10K   WHISTLE .ASC   2
DATAEND  .BIN   1K   LETTER01.ASC      2K   S170289 .CAR    6K   WHISTLE .BAS   2
DCBASE   .43    7K   LR       .        3K   SPRITES .ASC    6K
DISC     .BAS   2K   MEMO001 .DOC      3K   TEST    .BAS    1K
ELGAS    .ASC   5K   PICS    .BAS      6K   THELOOK .43     5K
--------------------------------------------------------------------------------
```

# Sprite Editor

**Here it is – the listing all you *Lookers* have been waiting for! With it, you can create designs for sprites in any mode. In a future edition we'll print the driver program to get some animation on your CPC. OK Ed, I wrote this one – where's the cheque?**

```
10 'AA Sprite Editor
20 'By Pat McDonald
30 'Public Domain - Amstrad Action April 1989
40 SYMBOL AFTER 32:MEMORY (HIMEM-4113)
50 DEFINT A-N:DIM inkno(16):noinks=16:stepno=4:
   spstart=HIMEM+1:inkno(1)=26:DIM pix(63,31)
60 WHILE AAFOLDED=0
70 GOSUB 1300
80 LOCATE 13,1:PRINT "AA Sprite Editor"
90 RESTORE 110
100 FOR N=1 TO 9:READ A$:LOCATE 7,2+(N*2):
   PRINT N;")  ";A$:NEXT
110 DATA Draw Sprite,Edit Sprite,Save Sprite,
   Load Sprite,Change Mode,Change Inks,Save Mode/
   Inks,Load Mode/Inks,Return to Basic
120 LOCATE 3,22:INPUT "Please enter your
   selection:";n
130 ON n GOSUB 150,670,840,890,940,1100,1420,1470
   ,1410
140 WEND
150 IF inkselect=0 THEN LOCATE 1,25:PRINT "INKS
   NOT INPUT";CHR$(7):CALL &BB18:RETURN
160 MODE modeno:GOSUB 1340:IF editselect=1 THEN
   GOSUB 680:editselect=0
170 LOCATE (80/stepno)/2,2:PRINT "Editing"
180 LOCATE 2,21:PRINT "Cursor keys to move"
190 LOCATE 2,22:PRINT "C=Change pen"
200 LOCATE 2,23:PRINT "SPACE=Finish"
210 LOCATE 2,24:PRINT "COPY=Paint pixel"
220 FOR n=0 TO noinks-1:LOCATE 1,(5+n):PEN n:PRINT
   CHR$(143);:LOCATE (80/stepno),(5+n):PRINT CHR$
   (143);:NEXT:FOR n=0 TO noinks-1:INK n,inkno(n)
   :NEXT
230 littlex=0:littley=398:bigx=192:bigy=350:
   paint=1:PEN 1
240 GOSUB 500:GOSUB 1330
250 WHILE INKEY(47) <> 0:decisx=0:decisy=0
260 IF INKEY(9) = 0 THEN GOSUB 370
270 IF INKEY(8) = 0 AND bigx >192 THEN decisx=-1
280 IF INKEY(2) = 0 AND bigy >102 THEN decisy=-1
290 IF INKEY(1) = 0 AND bigx <(448-(stepno*4))
   THEN decisx=+1
300 IF INKEY(0) = 0 AND bigy <350 THEN decisy=+1
310 GOSUB 420
320 IF INKEY(62) = 0 THEN GOSUB 470
330 WEND:CALL &BB18:CALL &BB00:CALL &BB18
340 INPUT #1,"Sprite number ?",n
350 IF n>=0 AND n<=15 THEN GOSUB 550
360 RETURN
370 GOSUB 1330
380 PLOT littlex,littley,paint
390 GOSUB 810
400 GOSUB 1330
410 RETURN
420 GOSUB 1330
430 littlex=littlex+(stepno*decisx)
   :littley=littley+(decisy*2)
440 bigx=bigx+4*(stepno*decisx):bigy=bigy+(8*decisy)
450 GOSUB 1330
460 RETURN
470 CALL &BB18:CALL &BB00:CALL &BB18:INPUT#1,
   "Which ink",n
480 IF n>=0 AND n<noinks THEN paint=n:GOSUB 500
490 CLS#1:RETURN
500 FOR n=0 TO noinks-1
510 LOCATE 2,5+n:PRINT " ";:LOCATE (80/stepno)-1
   ,5+n:PRINT " ";
520 NEXT
530 LOCATE 2,5+paint:PRINT CHR$(242);:LOCATE
   (80/stepno)-1,5+paint:PRINT CHR$(243);
540 RETURN
550 puthere=spstart+(n*256):RESTORE 660
560 FOR k=1 TO 8
570 READ scanfrom
580 FOR l=1 TO 4
590 FOR m=0 TO 7
600 POKE (puthere),PEEK(scanfrom+m)
610 puthere=puthere+1:NEXT m
620 scanfrom=scanfrom+80
630 NEXT l
640 NEXT k
650 RETURN
660 DATA &c000,&c800,&d000,&d800,&e000,&e800,
   &f000,&f800
670 editselect=1:GOSUB 150:RETURN
680 INPUT#1,"Sprite No. :",n:CLS#1
690 IF n>=0 AND n<=15 THEN GOSUB 710
700 RETURN
710 scanfrom=spstart+(n*256):RESTORE 660
720 FOR k=1 TO 8
730 READ puthere
740 FOR l=1 TO 4
750 FOR m=0 TO 7
760 POKE (puthere+m),PEEK(scanfrom)
770 scanfrom=scanfrom+1:NEXT m
780 puthere=puthere+80:NEXT l
790 NEXT k
800 RETURN
810 FOR k=0 TO 3:FOR m=0 TO -3 STEP -1
820 PLOT bigx+(n*stepno),bigy+(m*2),paint
830 NEXT:NEXT:PEN 1:RETURN
840 GOSUB 1300:GOSUB 1340
850 GOSUB 1350
860 IF (a>=0 AND a<=15) AND (b>=0 AND b<=15) AND
   a<=b THEN GOSUB 880
870 RETURN
880 SAVE a$,b,start,zlength:RETURN
890 GOSUB 1300:GOSUB 1340
900 GOSUB 1350
910 IF (a>=0 AND a<=15) AND (b>=0 AND b<=15) AND
   a<=b THEN GOSUB 930
920 RETURN
930 LOAD a$,start:RETURN
940 modeselect=1:GOSUB 1300:option=0
950 WHILE option=0
960 LOCATE 13,3:PRINT "Mode Select"
970 LOCATE 4,7:PRINT "Which of the three screen
   modes do"
980 LOCATE 4,9:PRINT "you wish to edit sprites in."
990 LOCATE 4,11:PRINT "Current selection is ";modeno
1000 LOCATE 4,15:INPUT "What do you want:";modeno
1010 ON (modeno+1) GOSUB 1030,1050,1070:WEND
1020 RETURN
1030 option=1:stepno=4:noinks=16
1040 RETURN
```



## CONTROLS

### ● Editing screen

| | |
|---|---|
| Cursor keys | =movement |
| Copy | =Paint pixel using selected pen |
| C | =Change pen |
| Space | =End editing session. Enter a number from 0-15 to save the sprite, or any higher value to abort. |

### ● Saving and loading

For sprites, enter a sprite number to start and end at, and also a filename. To save or load mode and inks, just put a filename.

### ● Changing mode and pens

Change mode to either 0,1, or 2: Pens, enter a number from 0-15 to edit, then a colour value of 0-26 (consult your manuals for colour charts). Any higher pen value will abort this section.

### ● Return to Basic

Puts you back in control. GOTO 60 to restart from here.

```
1050 option=1:stepno=2:noinks=4
1060 RETURN
1070 option=1:stepno=1:noinks=2
1080 RETURN
1090 END
1100 inkselect=1:GOSUB 1300:option=0
1110 LOCATE 13,3:PRINT "Ink Select"
1120 LOCATE 4,7:PRINT "Current screen mode is";
     modeno
1130 LOCATE 4,9:PRINT "so you have a maximum of";
     noinks;"colours."
1140 LOCATE 4,11:PRINT "Enter an invalid ink
     number to abort."
1150 LOCATE 4,15:PRINT "Press any key to begin."
1160 CALL &BB18:a=0:a1=0
1170 WHILE option < noinks
1180 MODE modeno
1190 IF a1>=0 AND a1<=26 THEN inkno(a)=a1:INK a,
     inkno(a)
1200 FOR n=0 TO noinks-1
1210 PEN n:INK n,inkno(n):PRINT CHR$(143)
1220 NEXT:PEN 1
1230 WINDOW#1,2,(80/stepno)-1,1,25:CLS#1
1240 LOCATE#1,(80/stepno)/2,3:PRINT#1,"Colours"
1250 LOCATE#1,3,6:INPUT#1,"Colour to change";a:
     option=a
1260 LOCATE#1,3,9:INPUT#1,"Change to";a1
1270 WEND
1280 RETURN
1290 END
1300 MODE 1:INK 0,0:INK 1,26:PEN 1:RETURN
1310 LOCATE (80/stepno)/2,1:PRINT CHR$(23);
     CHR$(1);:RETURN
1320 PRINT CHR$(23);CHR$(0);:RETURN
1330 GOSUB 1310:TAG:PLOT littlex,littley,1:MOVE
     (bigx+(stepno*-2)),bigy+4:PRINT
     CHR$(202);:TAGOFF:GOSUB
1320:RETURN
1340 WINDOW#1,1,(80/stepno),25,25:RETURN
1350 INPUT#1,"Start sprite :",a:CLS#1
1360 INPUT#1,"End Sprite :",b:CLS#1
1370 GOSUB 1400
1380 start=spstart+(a*256):zlength=((b-a)*256)+255
1390 RETURN
1400 INPUT#1,"Filename :",a$:CLS#1:RETURN
1410 END
1420 GOSUB 1300:GOSUB 1340:GOSUB 1400:IF LEN(a$)=0
     OR LEN(a$)>8 THEN RETURN
1430 POKE (spstart+4096),modeno:FOR n=1 TO noinks
1440 POKE (spstart+4096+n),inkno(n-1)
1450 NEXT
1460 SAVE a$,b,spstart+4096,17:RETURN
1470 GOSUB 1300:GOSUB 1340:GOSUB 1400:IF LEN(a$)=0
     OR LEN(a$)>8 THEN RETURN
1480 LOAD a$,spstart+4096
1490 modeno=PEEK(spstart+4096):FOR n=1 TO noinks
1500 inkno(n-1)=PEEK(spstart+4096+n)
1510 NEXT:inkselect=1:RETURN
```
●

## Use it

On the main menu there are nine options. These let you draw new sprites or edit new ones, save or load sprites (from just one to the whole bunch), change mode and pen colours, and also save the 'palette' of modes and pens onto a tape or disk. Exciting stuff!

The sprites are numbered from 0 to 15, as are the pens. The number of inks you can use, however, is limited as normal by screen mode – mode zero equals 16, mode one gives you four and mode two just two. Higher resolution is granted by using these less colourful modes. That is, mode 0 has a total of 160 pixels across: mode one is better with 320 across: and mode two is er... double this again (top to bottom is always 200 pixels).

## 35,000 PEOPLE DEMAND TO SEE YOUR PROGRAM!

Send us your latest and greatest programming masterpiece and you can share it with 35,000 people – and earn yourself as much as £100 into the bargain! Everything that appears in this section of the magazine is paid for, and £10 is the very least we pay.

So get to it! Send your listing, together with name, address and SAE (for return) to: ***Type-Ins*, *Amstrad Action*, 4 Queen St, Bath, BA1 1EJ.**

Here's a few tips that should increase your chance of getting into print:

- Send only your own original, unpublished work
- We like short es!
- Enclose a covering letter with a short explanation of what your program does
- REM statements make the program easier to understand
- Use lower-case rather than capitals for variable names
- Do not use as variable names letters that look like numbers (O and 0, for instance, or l and 1)
- If you're writing in machine code, it would be very helpful to our readers if you include a checksum routine
- Structure your program – divide it into sensible procedures
- Avoid long multi-statements. Short lines make debugging easier
- Test your program thoroughly. When you think it's completely foolproof and perfect, try it out on a friend. Offer them 10p for every bug/problem they find!
- Make sure your name and address is on every single disk, cassette or slip of paper you send us. You wouldn't believe how many items we have received that become separated from their covering letter and then can never be reunited!
- Every so often we invite a *Type-Ins* contributor to write something about their program and/or themselves. So a phone number and an indication that you'd be interested in this would be useful – after all, we pay extra to allow you to tell us how wonderful your listing is!

### Hopeless programmers can help too!

But you needn't be a programming genius to help us out. Even if you don't have a wonderful listing for us, you can still play your part in *Type-Ins*. Sometimes a good idea for a program can be just what is needed to set one of our readers off.

So if you have a particular problem or idea for an application, share it with us. Send it to the address above – after all, we know thousands and thousands of the best Amstrad programmers around!

# Hacker

In response to numerous requests, and to placate an ed who's fed up of sending out photocopies to readers who've lost or never had the original, we're reprinting **Martin Schroeder's** ever popular hacking aid. It works for tapes as well as disks.

Hacker allows you to find infinite lives, infinite energy or infinite time for almost any game you care to mention. It searches through a program and looks for certain routines – which could be associated with lives, energy or time – and then prints (to either screen or printer) the most likely POKEs. Martin's program may list a number of different POKEs. Some don't do anything. Others affect different parts of the game (and may even crash it). The correct POKE is lurking among the others listed. It's just a matter of weeding through them all until you find the

```
1 ' Hacker
2 ' by Martin Schroeder
3 ' Amstrad Action  March 88
1Ø MODE 2:f$=CHR$(13)+CHR$(1Ø):adr=448ØØ:steps=34
2Ø FOR loop=1 TO steps:check=Ø
3Ø FOR q=1 TO 1Ø:READ a$:a=VAL("&"+a$)
4Ø POKE adr+(loop-1)*1Ø+q-1,a:check=check+a:NEXT
5Ø READ checks$:checks=VAL("&"+checks$)
6Ø IF checks<>check THEN 17Ø
7Ø LOCATE 1,2:PRINT"checking line:";18Ø+(loop-1)*1Ø:NEXT
8Ø MODE 2:PRINT"HACKER V1.Ø  (c) 1987 M.Schroeder";f$;f$;
9Ø PRINT"Please insert a disc then press any key"CHR$(7)":"
1ØØ CALL &BB18:PRINT:PRINT" saving HACKER.BIN . . ."
11Ø SAVE"hacker",b,&AFØØ,&16Ø
12Ø PRINT:PRINT"For screen type: "
13Ø PRINT "name$=";CHR$(34);"filename";CHR$(34);":CALL ";
14Ø PRINT "&AFØØ,@name$": PRINT:PRINT"For printer type: "
15Ø PRINT "name$=";CHR$(34);"filename";CHR$(34);":CALL ";
16Ø PRINT "&BØ23,@name$":END
17Ø PRINT"Data Error in line ";18Ø+(loop-1)*1Ø;CHR$(7):END
18Ø DATA CD,Ø4,BØ,D5,C5,CD,DF,AF,D1,E1,728
19Ø DATA D5,7E,FE,3A,CC,41,AF,FE,21,CC,632
2ØØ DATA 53,AF,FE,Ø5,CC,66,AF,FE,46,CC,5F6
21Ø DATA 79,AF,FE,3D,CC,5B,AF,D1,E5,CD,6BC
22Ø DATA Ø9,BB,3Ø,Ø3,CD,18,BB,E1,23,1B,3B6
23Ø DATA B3,7A,FE,ØØ,28,6C,18,DØ,E5,DD,569
24Ø DATA E1,DD,7E,Ø3,C9,CD,3A,AF,FE,3D,5F9
25Ø DATA 28,Ø1,C9,23,23,23,3E,Ø2,CD,84,2EC
26Ø DATA AF,ØØ,C9,CD,3A,AF,FE,35,28,EF,578
27Ø DATA C9,3E,Ø1,18,15,E5,DD,E1,DD,7E,533
28Ø DATA Ø1,C9,FE,7Ø,28,Ø8,DD,7E,Ø2,FE,4C3
29Ø DATA 43,28,Ø1,C9,3E,Ø3,CD,84,AF,23,399
3ØØ DATA C9,CD,5F,AF,FE,Ø5,28,Ø1,C9,23,4BC
31Ø DATA 18,EE,E5,32,1F,BØ,21,AF,AF,Ø6,471
32Ø DATA Ø6,CD,B8,AF,E1,E5,CD,CØ,AF,21,65D
33Ø DATA B5,AF,Ø6,Ø3,CD,B8,AF,3A,1F,BØ,4AA
34Ø DATA CD,C9,AF,E1,3E,ØD,CD,5A,BB,3E,591
35Ø DATA ØA,CD,5A,BB,C9,5Ø,4F,4B,45,2Ø,4Ø4
36Ø DATA 26,2C,3Ø,2Ø,7E,CD,5A,BB,23,1Ø,335
37Ø DATA F9,C9,7C,CD,C9,AF,7D,CD,C9,AF,745
38Ø DATA C9,F5,1F,1F,1F,1F,CD,D2,AF,F1,579
39Ø DATA E6,ØF,FE,ØA,38,Ø2,C6,Ø7,C6,3Ø,3FA
4ØØ DATA C3,5A,BB,21,EC,AF,Ø6,18,CD,B8,537
41Ø DATA AF,CD,A4,AF,18,B8.54,72,79,2Ø,4FE
42Ø DATA 74,68,65,2Ø,66,6F,6C,6C,6F,77,3F4
43Ø DATA 69,6E,67,2Ø,5Ø,4F,4B,45,73,3A,33A
44Ø DATA DD,66,Ø1,DD,6E,ØØ,46,23,5E,23,379
45Ø DATA 56,EB,CD,77,BC,C5,D5,EB,CD,83,716
46Ø DATA BC,CD,7A,BC,D1,C1,C9,Ø3,ØØ,ØØ,51D
47Ø DATA ØØ,21,5A,BB,E5,11,2Ø,BØ,Ø1,Ø3,3ØØ
48Ø DATA ØØ,ED,BØ,E1,3E,C3,77,21,48,BØ,5ØF
49Ø DATA 22,5B,BB,CD,ØØ,AF,21,2Ø,BØ,11,3B6
5ØØ DATA 5A,BB,Ø1,Ø3,ØØ,ED,BØ,C9,CD,2E,47A
51Ø DATA BD.38,FB,FE,ØD,C8,C3,2B,BD,ØØ,56E
```

**You need to supply Hacker with the name of the file you wish to search. To list the POKES to screen simply enter `a$="filename":CALL &AFØØ,@a$`. To make a printer dump type `a$="filename":CALL &BØ23,@a$`.**

**For instance, if you have a program with a file name, code2.bin:**

```
a$="code2.bin":CALL &AFØØ,@a$
```

**then press the return key. A list of POKES appears:**

```
POKE &Ø57Ø,Ø Ø1
POKE &1337,Ø Ø1
POKE &4589,Ø Ø2
```

**Forget the last two digits (either be Ø1, Ø2 or Ø3) – they simply refer to the type of routine Hacker has encountered. Make a note of all the POKES. Insert one of the POKES listed into the game's loader and run it. Keep doing this until you come up with a useful POKE.**

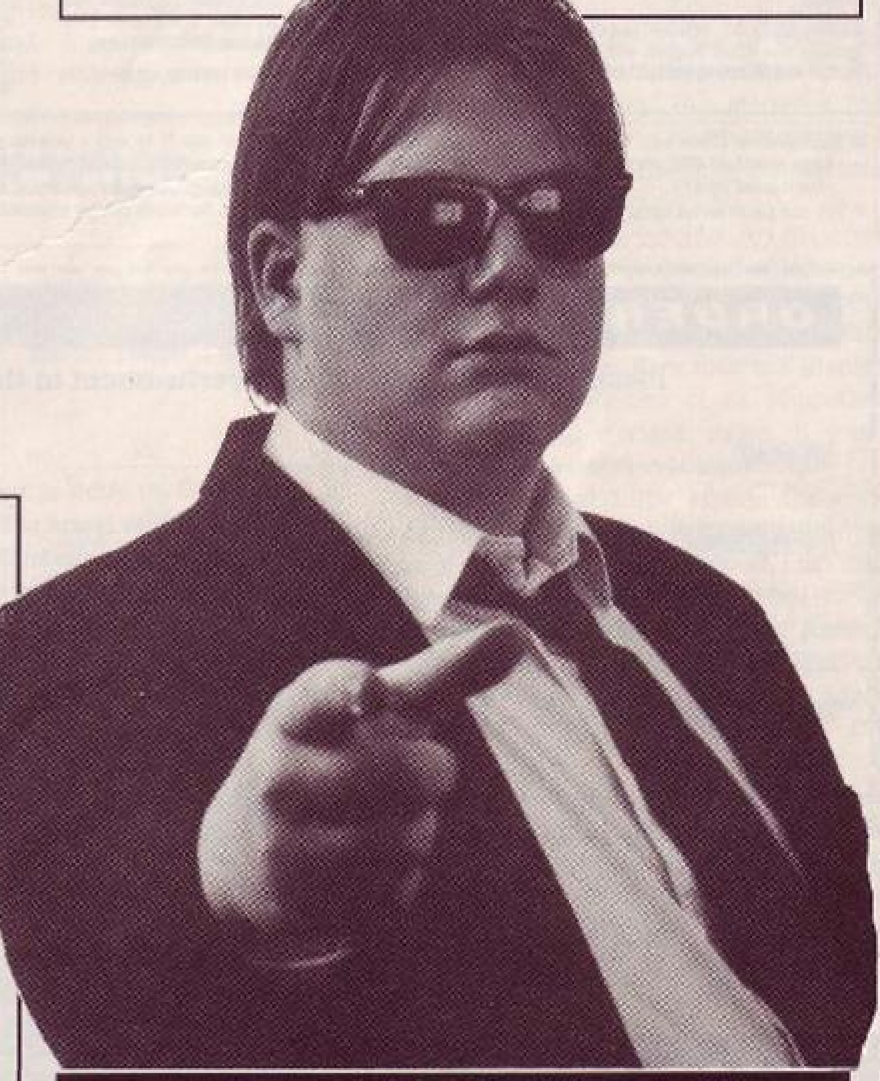
**If you use Hacker to discover pokes, by all means mention the fact when you send them in to *Cheat Mode*. Good hacking!**

## Watch out!

**Martin's program watches out for three types of routine:**

```
1. LD A, (xxxx)    2. LD HL,xxxx    3. LD B,(HL)
   DEC A              DEC (HL)         DEC B
   LD (xxxx),A                         LD (HL),B
```

**Every POKE that Hacker lists has a number following it. This corresponds to the routine found. By taking note of the values after the POKE you can determine which POKES are of no use to you.**



● It's the chief hacker himself, alias Pat McDonald. Not a pretty sight...

# SMALL ADS

## FOR SALE

CPC 6128, mono monitor, Multiface 2, Lightpen, Advanced Art Studio, MP2 Modulator, Infocom Adventures, Books, magazines, Disc Box, Games and utilities, worth over £600. Sell as lot only £330 ono. Buyer Collects.
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We supply AMSOFT CF2 DISCS FOR £2.50. SEND SAE for FREE Transfer lists. IF WE CAN'T DISC IT WE REFUND YOUR MONEY. What a nice man, a very, very nice man! Make cheque payable to:
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Amstrad 6128 computer with C.P.M. No monitor. Ideal way of upgrading 464. As new £153. Tel (evenings) **Glen 0642 806358.**

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Protext, Tasword, Wordstar users: rapidly convert files between these formats with the "Convertor" (uses CP/M+), £7.50 Cheque/PO or SAE for details: **Peter Reid, 21 Southhill Avenue, Rutherglen, Glasgow G73 3TB.**

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## WANTED

D K Tronics 256K memory expansion for CPC 6128. Must be in nearly new condition. George Weston. **Tel: 0494 673913 or Prestel Mailbox 0494 63913.**

Please help. I've just bought a CPC 6128 but I've managed to have an accident with the CPM master disks. Now I can't save anything. Please help me. **Tel Harrow 01-423-3571.**

Wanted Amstrad CPC Firmware Guide Book Man - Soft 968. Write to **Z Zen 61A Warwick Street, Earlsdon, Coventry CV5 6ET, stating price.**

## SERVICES

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Earn £3 hourly for your hobby working from home for a publishing company. No selling involved. For details send £1 + SAE to **Mr Stewart, 58 Whinbank, Ladywell, Livingston, Scotland.**

Amstrad enthusiasts magazine - *A.E.M.* - issue one, as featured in this month's *Amscene*. Packed with serious CPC information. Send 90p and large A4 SAE (26p postage!) To **Neil Selwyn, Highfield , Coombe Keynes, near Wareham, Dorset.**

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- **This section offers you the chance to speak direct to the huge world of CPC owners – or would be owners. Users report good results.**
- **You can place an ad up of up to 30 words for just £5. So you could use it to sell a printer, or launch a user group, or publicise a piece of software you've written.**
- **One thing you can't advertise is the sale or swap of software. Such ads can be misused by pirates.**
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- **We'll place the ad in the next available issue (published two to seven weeks after we receive your order).**

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# PILGRIM

**This month: a slice of history, a Clue Pot special, and Lords and Ladies!**

# Old gold – adventures in history, part I

**CPC Adventure releases may be on the decline, but there are dozens of superb titles still available. The Pilgrim wanders through history, pausing to point out Games You Have To Have**

The CPC arrived at a time when the UK adventure software scene was changing dramatically. In the early '80s we Pilgrims had a pretty good time of it. The arcade industry was still growing and there was space on the shelves for games from specialist adventure software houses like Carnell, Richard Shepherd, and Adventure International.

### As old as time itself (1983)

A surprising number of these early games were later to appear reprogrammed for the Amstrad. They included titles like *Acheton* (now available from Topologika) and the early 'dungeon' games: *Classic Adventure* and *Colossal Cave/Colossal Adventure*, the best version of which remains the one available from Level 9.

Another little-known Cave-genre classic was *Castle Blackstar*, programmed in 1983 by SCR and later re-published by CDS.

These are both essential purchases for those still keen on puzzle-solving without frills, though all the early Level 9 titles have considerable narrative style and strength. Furthermore, the reprogramming of the Level 9 games (plus graphics) and their re-issue by Rainbird as *Jewels of Darkness* makes them excellent value and disguises their age, advantages not entirely shared by the Topologika range.

When *The Hobbit* was released in 1983 it set the tone of future adventure releases by including a complex parser and graphics. Until that time, adventures were mostly verb-noun text-only affairs relying on puzzles for attraction and the imagination for atmosphere.

### Pilgrim silenced

Following *The Hobbit*, graphics and complex parsers suddenly became fashionable. The first adventure to make graphics its main selling-point was *Twin Kingdom Valley*, which featured over 170 locations and – incredibly for this period of limited RAM and crude compression techniques – a full-screen graphic for each one.



An Interceptor game featuring superb graphics that got the best from the CPC display. A Celtic scenario and some great pics, even if the gameplay was a bit simple

The Pilgrim was struck dumb – a rare occurrence – on loading *TKV* for the first time and seeing an animated rabbit hop down a country lane in the first location. This started a brief craze for animated sprites in adventure graphics (mainly adopted by Adventure International) but thankfully it never got very far.

*TKV* also boasted interactive characters (another *Hobbit* innovation) and atmosphere. Unfortunately an Amstrad version was never released, but *TKV*'s great rival, *Heroes of Karn* from Interceptor, was. *Karn* took the graphics and interactive characters of its competitors and added a third element: music. It was a great success and is still available today.

This background helps explain the emergence of the somewhat bizarre Interceptor range of adventures for the Amstrad. I call them 'bizarre' because they were combined superb graphics and limited story-lines. For Amstrad owners, however, they were significant because they were the first mainstream adventures to be written primarily for the CPC machines.

Together with a number of small, independent software houses, the Interceptor titles for the Amstrad came at a time when most larger companies had decided that adventures were the kiss of death. This didn't mean the end of the adventure scene for the CPC... ●

**● Next month we find out why when we look at the work of the smaller, independent adventure houses. Don't miss it!**

## Six of the best from way back when...

*Jewels of Darkness*

**Level 9's first three titles, reprogrammed with added graphics and enhanced parsers, but still having something of their original powerful atmosphere. Now a bargain release from Rainbird at £19.95.**

*Acheton*

**Text-only classic originally available on the BBC but long since converted for the Amstrad. Definitely for text-only puzzle fans only, but strong stuff if you like that sort of thing.**



● *Castle Blackstar* – An underrated, little-known classic 'cave-genre' adventure. Now only available second-hand, but worth the effort if you're keen on underground adventures of the old school

*The Hobbit*

**Unbelievably this game still holds good after all these years. Worth playing if only to find out what all the fuss was about - and don't forget it was programmed in 1983!**

*Heroes of Karn*

**Inspired by *Twin Kingdom Valley*, the C64 version had stunning music. The Arnold version doesn't, unfortunately, but still retains its position as a perfect example of an early graphic adventure**



● *Seas of Blood* – one of the last Adventure International titles, converted for the Amstrad and based on the *Fighting Fantasy* series. Now available second-hand only, but worth a look as typical of the time

SPECIAL

# Clue pot

**Your heart's in your mouth, your sword's in your hand, your feet are stuck fast in the maw of a giant clam, you're underwater, you're running out of breath, and coming straight for you is a marine Balrog the size of Westminster Abbey. What now?**

## GNOME RANGER

Put weedkiller on Ingrid to get through hedge. Plant stripy bulb in compost to get two telelilies. Put one telelily in pond, go west, and wait for beanstalk to burst. Retrieve fern, and with greenslave push the boulder. Get the tree to go to stinkwort and to take telelily (dropped bygreenslave) and put it on flower. Meanwhile, you go to the kitchen and put the first three ingredients of thefertiliser potion in the pot,. Drop the second telelily in the kitchen. When the flower appears, put it in the pot immediately.

## INGRID'S BACK

**Don't forget to sign petition yourself. To cross the river take the dogless carriage to the top of Ploug GnomesHill and take a run at it. To get Hermit to sign, drop the petition in her cave, come out, wait, andgo back in to collect it. Get Gnoah to lay in front of the steamroller to make it go the other way. To blow up the steamroller, put the loaf in the chimney when the Trolls leave it.To enter the Well, drop one telelily in the Well. Drop the other by the Well and enter the one by the Well. Get Daisy to examine the rubbish to find a letter in the dustbin Drop evidence by the safe. Then hide behind the curtain until Jasper comes.He will open the safe to hide the evidence and you will see the combination.**

## MINDFIGHTER

Examine the rubble in the civic centre ruins. Give the snowstorm to Daryl. Break the cobweb in the building to find a hidden object. Don't drink the water. Use the wrench and chisel to break the stairs in the ruined building. Wear the gas mask in the industrial wastelands. The ship arrives in the docks at 3 p.m. on Wednesday. Give the dead dog to the rabid foxes.

To get into a trance, INHALE, HOLD, EXHALE. To metamorphose you need to be in a trance, then METAMORPHOSE. To destroy the ship, empty the petrol, burn the rag with the lighter, and run off the ship.After finishing your tasks in part one, go to the fence and metamorphose to fly across it.

## LANCELOT

**Spend the night with Merlin. Throw wood to pass Phelot. When Morgon captures you, get the glass from Morgan and give it to the Maiden. She will drink the love potion and release you. Close the Panel so the Magical Knight can't get back into it..Close shutters inside Garlon's Turret to fight on equal terms with him.**

**Make sign of the cross to escape Damosel in her pavilion. Give the Chalice to the Thirsty Pilgrim. Lure both dragons to the hillock by making one follow you and the other follow Galahad. Then go west and they will kill each other. Keep throwing water on the fire using the cup and chalice. eg. GALAHAD,WAIT, FILL CUP, THROW WATER ON FIRE (as many times as the buffer allows) and LANCELOT, FILL CHALICE, THROW WATER ON FIRE so that both characters are throwing water at the same time.**

### Thanks for these tips to:

- John Valentine, Manchester
- Graham Wheeler, Bath
- Jason Riley, New Zealand
- Bruce Marshall, Congleton
- Ross Halliday,Stotfold
- John Rodios, Thessaloniki
- Joseph Castellino, Tasmania
- Paul Blythin, Ulceby
- Eric Coulin, Australia
- Ian Houghton, Wigan
- and, of course, The Pilgrim himself!

## THE PRICE OF MAGIK

Rub eyebright into eyes to see in the dark. Cast SEE in the study to reveal a hidden exit. Cast SEE at the altar with unholy font to reveal another exit. When the brass monkey jumps onto your back, go to the cold room. You will then see a crystal ball and a black ball. Crystal ball is a focus for the ESP spell. At the start, go west, get candle, and burn woodpile, then take ash. Ash is focus for ZAP spell. Examine the knucklebone. You will see a ring. Drop knucklebone, take ring, and take knucklebone. This means you now have the two objects separately. Now make your way to East of Attic and cut mirror with diamond. You will see a small mirror. This is the focus for the ZEN spell. To the south is a prism, the focus for the XAM spell.

## CORRUPTION

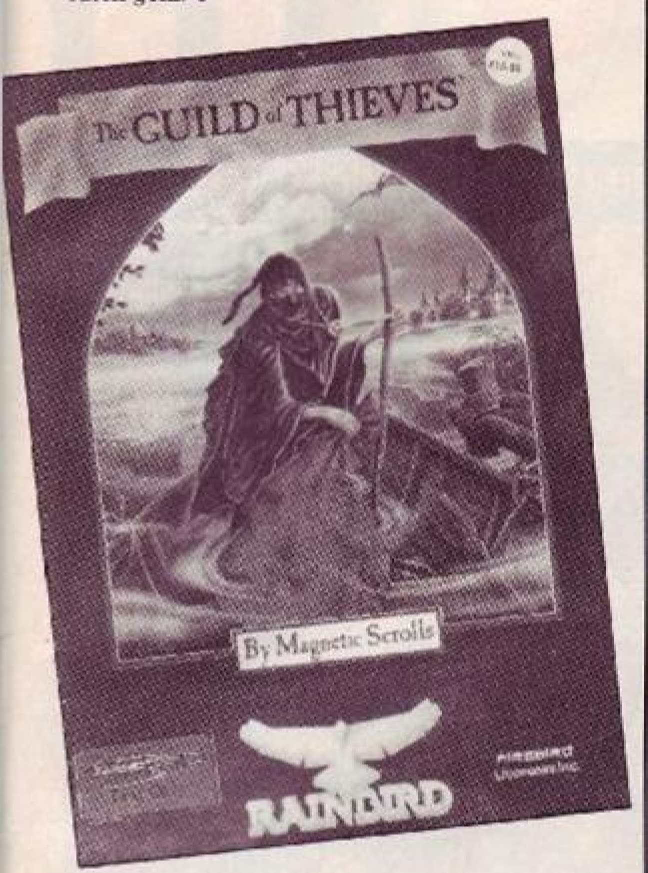
**Here's a little passage that causes some people difficulty. To crack the safe you have to wear the stethoscope and put it on the safe. Turn the dial four times. When the safe opens get the ledger, casino chips, and receipts. Read the ledgers and receipts. Now get out of the room and just before 2.00 wait outside Le Monaco restaurant. Follow Jenny (when she arrives) into the restaurant and have dinner. She will tell you she is having a divorce and a little while after that she will leave. At 3.00, you will be allowed into the casino at the back of Le Monaco.**




## GUILD OF THIEVES

There's a tricky bit in this game, due to the random element of the programming. To blow open the bank vault door you must put the gum in the keyhole and then TELL MYNAH BIRD HOORAY, DROP CAGE AND BOTTLE, in such a way that when the manager is outside the office (when he leads you out) and can't get in because of the gum in the keyhole, the mynah bird squawks 'Hooray' and the bottle explodes. You should SAVE just prior to this part of the game, because if you fail you won't get a second chance (you can't see the manager a second time). The honey is a red herring. Rub succulents on feet to get over the hot

coals. Get the gem from the wax by holding mirror in beam, reflect beam onto wax,and catch gem. ●




## CONTACTING THE PILGRIM

The Pilgrim welcomes correspondence from all readers on matters adventorial. Contributions to the *Clue Pot* and the *Lords and Ladies* sections are particularly welcome.

I'm afraid that it's usually impossible for me to write personal replies to letters, but rest assured that I will do my best to answer, either in this column or by post. If you have a modem and access to Telecom Gold or Microlink, you can contact me on 83:JNL251.

# Clue thimbles - a selection of shorties

### • Mindshadow

Dig with shell between the two trees e. e. s. s. e of the hotel and findleaflet. Enter bank and ask for deposit box quoting number on leaflet. Give hat to woman in Rick's cafe, sit down in the restaurant area, wait until a man walks past, then follow him.

### • Gremlins

*Send Gizmo through the vent to open door. Weld all vents shut. Empty the pool!*

### • Spy Trek

Give cloth to old women and say 'Make habit.' Give doll to little girl. Chop down goal post for gondola.

### • Zork

*1Dam: if the green bubble on the control panel is glowing then turn the bolt. Dam base: you need a pump to inflate the pile of plastic. Drop all sharp objects before boarding the boat. Shaft room: put screwdriver, ivory torch, and coal in basket. Landing river: leave NOW or pay the price. Sandy cave: dig 4 times. Aragin Falls: wave the sceptre. Machine room: put coal in machine and turn on. Grate room: use the skeleton key.*




### • Lurking Horror

In dead storage room, shift pallets with fork-lift until a passage exists. To reach the top of the dome, wear gloves and climb the rope like thing. Get past the maintenance man by reaching the glass-fronted cabinet,smashing the glass, getting the ace, cutting the cord with the ace,throwing the wax at the maintenance man. Hang around to see his demise!

### • Rigels Revenge

*To find pass, examine the seat in the truck. To get past check point, wear uniform, hold rifle, and follow troops. If you have trouble with an android, look under bench. The final problem involves a monster in the sewer. You need 'flair' to solve it!*

### • Kentilla

No need to visit Ogeron. Simply say 'Kentilla'.

# The Lords and Ladies of Adventure

Welcome to two new Lords and one new Lady this month. Make sure you give them the honour they deserve! And make particularly sure that you always include a stamped addressed envelope when asking for help.

● Dungeons, Amethysts, Alchemists and Everything; Heroes of Karn; Subsunk; Knight Orc; Lords of Time; Mordens Quest; Questprobe III; Return to Eden; Seabase Delta; Rigels Revenge; Red Moon; Cricket Crazy; Colour of Magic; Worm in Paradise; Rebel Planet; Life Term; Star Wreck; Kobayashi Naru; Snowball; Adventure Quest; Football Frenzy; Scarey Tales; Price of Magik; Colossal Adventure; Dungeon Adventure; Smashed; Wizbiz; The Boggit
*H. Higgs, 20 Naworth Close, Highbury Vale Estate, Bulwell, Nottingham, NG69EL.*

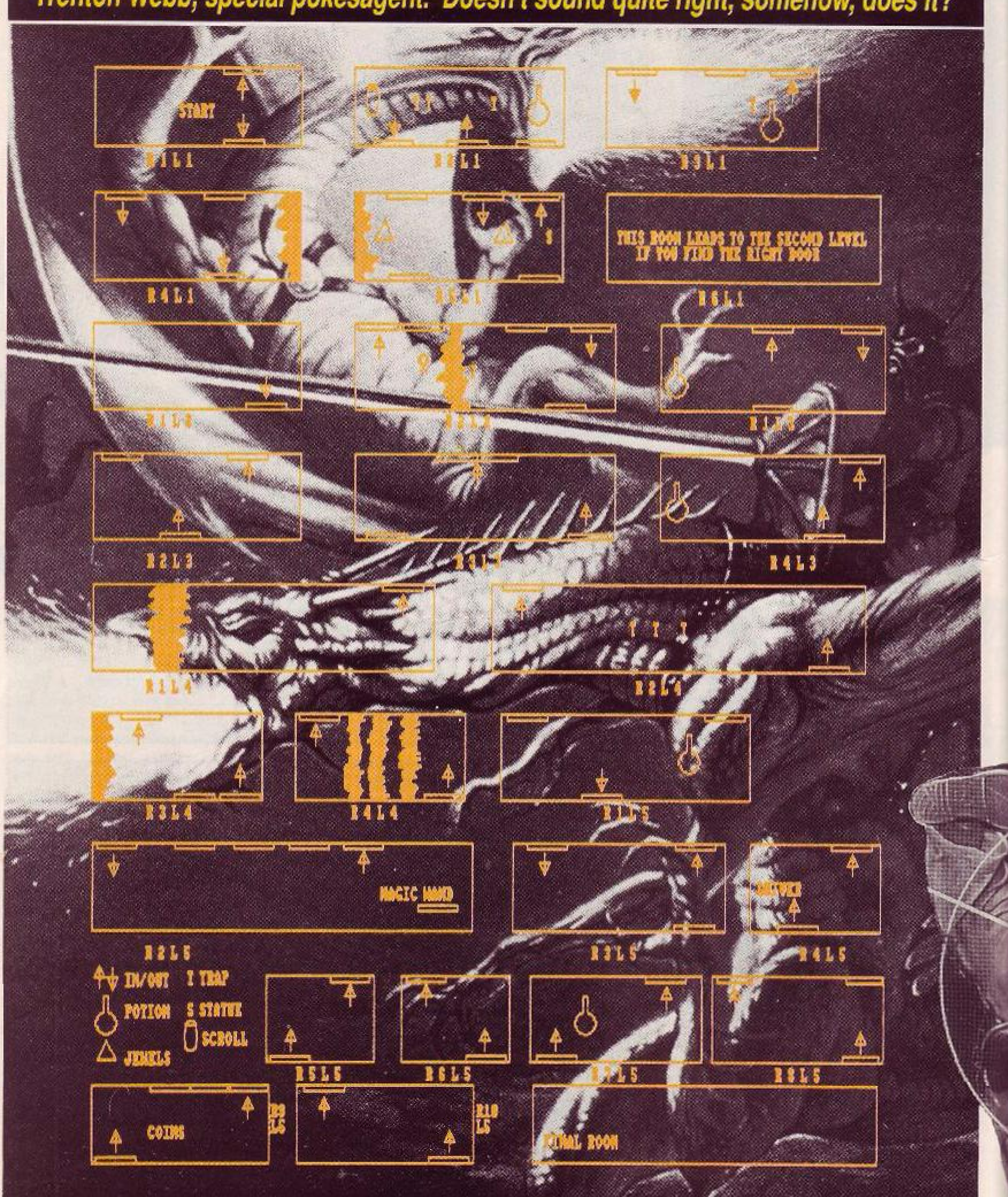
● Adventure Quest, bored of the Rings, Colossal Adventure, Dungeon Adventure,Emerald Isle, Erik the Viking; Fantasia Diamond; Forest at the Worlds End;Gremlins; Heroes of Karn; Hitchhikers Guide; Jewels of Babylon; Lords ofTime; Message from Andromeda; Mordens Quest; Never Ending Story;Planetfall; Return to Eden; Robin of Sherlock; Robin of Sherwood; Seabase Delta; Snowball; Terrormolinos; the Boggit; Very Big Cave Adventure;Warlord; Zork 1
*Alistair McBain, 52 Fox Covert Avenue, Corstorphine, Edinburgh, EH12 6UH.*

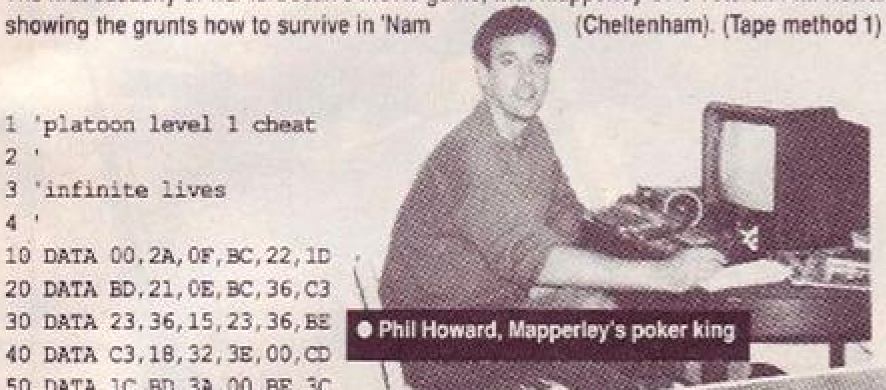
● Aftershock; Brawn Free; Case of the Mixed Up Shymer; Forest at the Worlds End; Grange Hill; Haunted House; Message from Andromeda; Mindshadow; Rigels Revenge; Seabase Delta; Subsunk; Terrormolinos; Three Weeks in Paradise;Trial of Arnold Blackwood; Warlord
*Debby Howard, 10 Overton Road, Abbey Wood, London, SE2 9SD*

■ Since Debby, Alistair and Mr Higgs have so kindly put their necks on the block to help the rest of us, perhaps you could help them? Those of you who have mastered *Murder On The Atlantic* might drop Debby a line helping her with the GEHEIM program, and Mr Higgs can't avoid starving to death in *The Boggit!*

# CHEAT MODE

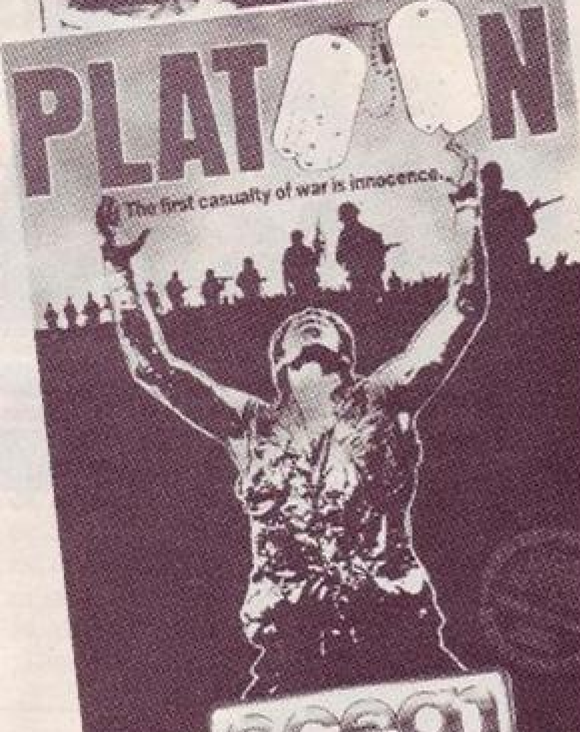
**'Trenton Webb, special pokesagent.' Doesn't sound quite right, somehow, does it?**






The first casualty of war is Ocean's movie game, with Mapperley CPC veteran Phil Howard showing the grunts how to survive in 'Nam (Cheltenham). (Tape method 1)

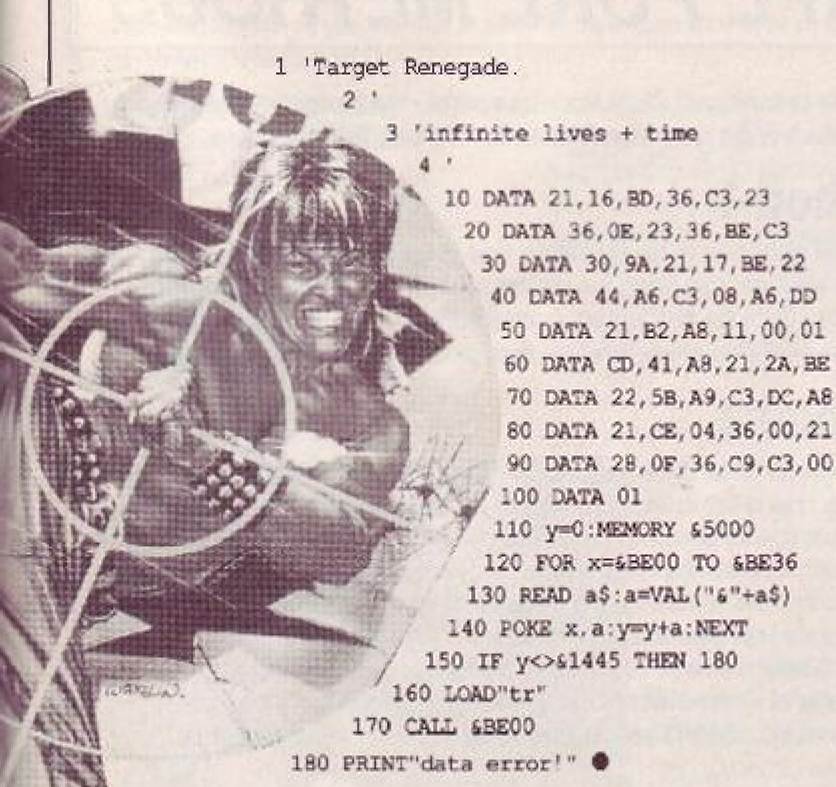
```
1 'platoon level 1 cheat
2 '
3 'infinite lives
4 '
10 DATA 00,2A,0F,BC,22,1D
20 DATA BD,21,0E,BC,36,C3
30 DATA 23,36,15,23,36,BE
40 DATA C3,18,32,3E,00,CD
50 DATA 1C,BD,3A,00,BE,3C
60 DATA 32,00,BE,FE,02,C0
70 DATA 21,2B,BE,22,5B,34
80 DATA C9,DD,21,5B,AA,11
90 DATA 00,01,CD,EA,a9,21
100 DATA 3E,BE,22,0A,AB,c3
110 DATA 85,AA,21,52,BE,11
120 DATA 00,AE,01,16,00,ed
130 DATA B0,21,00,AE,22,e3
140 DATA 45,C3,0D,40,E5,21
150 DATA 18,01,22,6F,09,21
160 DATA 7D,10,36,C9,21,40
170 DATA 00,22,42,C6,E1,c3
180 DATA 40,00
190 MEMORY &3000:y=0
200 FOR x=&BE00 TO &BE67
210 READ a$:a=VAL("&"+a$)
220 POKE x,a:y=y+a:NEXT
230 IF y<>&24B0 THEN 290
240 LOAD""
250 CALL &BE00
290 PRINT"data error!" ●
```




● Phil Howard, Mapperley's poker king

## TARGET RENEGADE

Imagine that! Phil Howard strikes again, going rogue with infinite lives and all the time you could want. (Tape method 1)

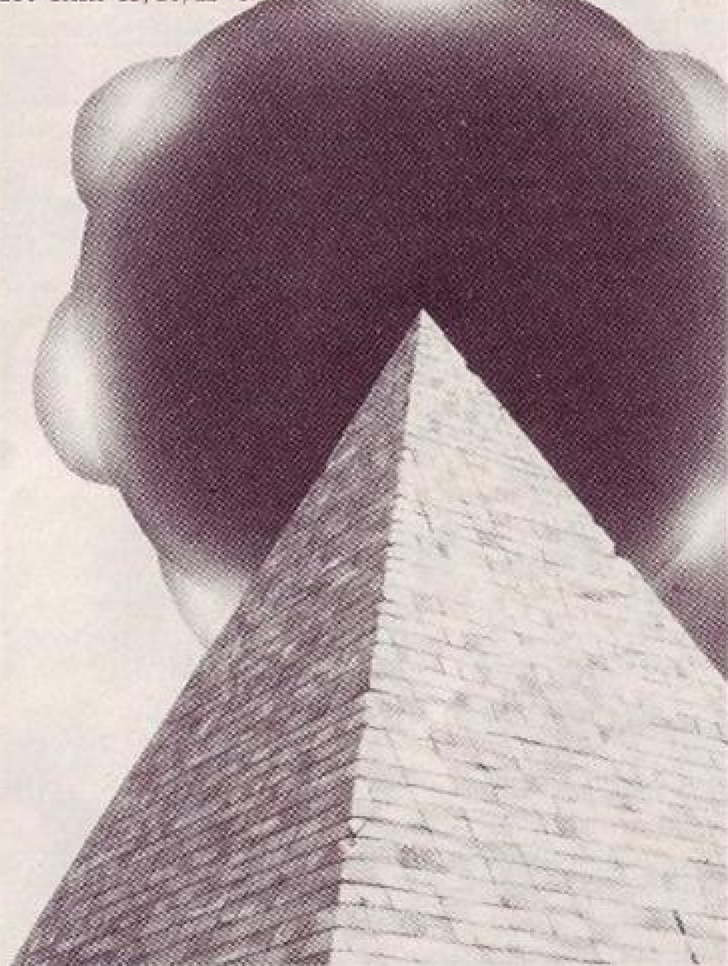


```
1 'Target Renegade.
2 '
3 'infinite lives + time
4 '
10 DATA 21,16,BD,36,C3,23
20 DATA 36,0E,23,36,BE,C3
30 DATA 30,9A,21,17,BE,22
40 DATA 44,A6,C3,08,A6,DD
50 DATA 21,B2,A8,11,00,01
60 DATA CD,41,A8,21,2A,BE
70 DATA 22,5B,A9,C3,DC,A8
80 DATA 21,CE,04,36,00,21
90 DATA 28,0F,36,C9,C3,00
100 DATA 01
110 y=0:MEMORY &5000
120 FOR x=&BE00 TO &BE36
130 READ a$:a=VAL("&"+a$)
140 POKE x,a:y=y+a:NEXT
150 IF y<>&1445 THEN 180
160 LOAD"tr"
170 CALL &BE00
180 PRINT"data error!" ●
```

## TOTAL ECLIPSE

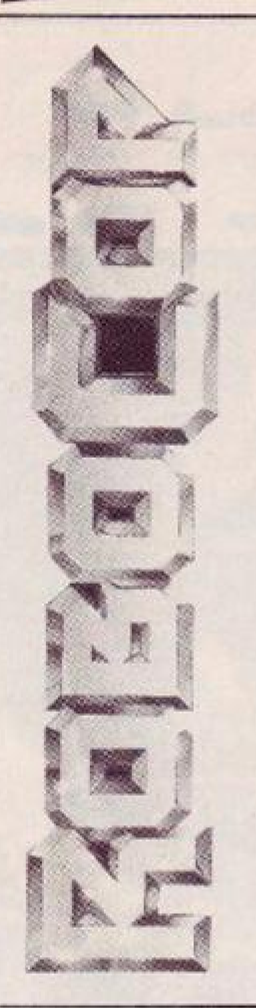
Enjoy the Christmas tape? Left you thirsting for more? Well wait no longer as you can go *Total Eclipse* Training again, but this time with infinite supplies of water, courtesy of **Simon Edmonds. (Disk)**

```
10 ' Total Eclipse Trainer
20 ' Transferred disc version
30 ' by Simon Edmonds
40 MODE 1
50 INK 0,0:INK 1,24:INK 2,20:INK 3,15
60 MEMORY &1B15
70 LOAD"tecon"
80 LOAD"teprog"
90 FOR a=&BE80 TO &BE87
100 READ a$
110 POKE a,VAL("&"+a$)
120 NEXT
130 CALL &BE80
140 DATA 3e,00,32,eb,68
150 DATA c3,16,1b ●
```



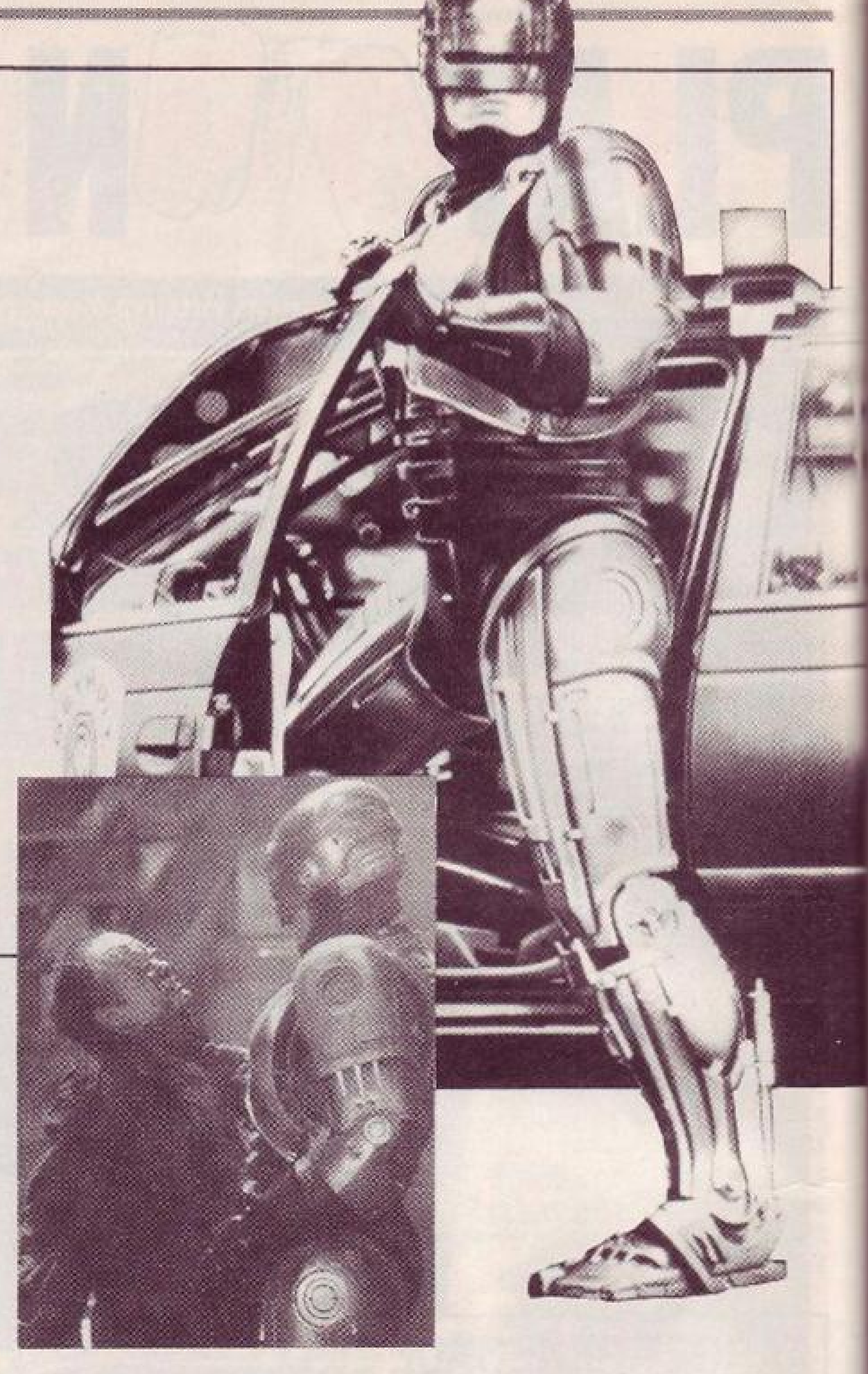
### The great Freescape special!

We're planning a Megaterrific Super Totally Fabulous Complete Cheat Special for the **Incentive** Freescape games – namely ***Dark Side, Total Eclipse*** and ***Driller***. Do you have any hints, tips, pokes or maps? We want them. Don't worry if you think we've seen them before, send them anyway. We're going to go a bit loopy with prizes as well, so get cracking!




Part man, part machine, all cheat with yet another Phil Howard poke. Murphy gets a helping hand in the form of infinite energy to help him sort out those bad guys.
(Tape method 1)

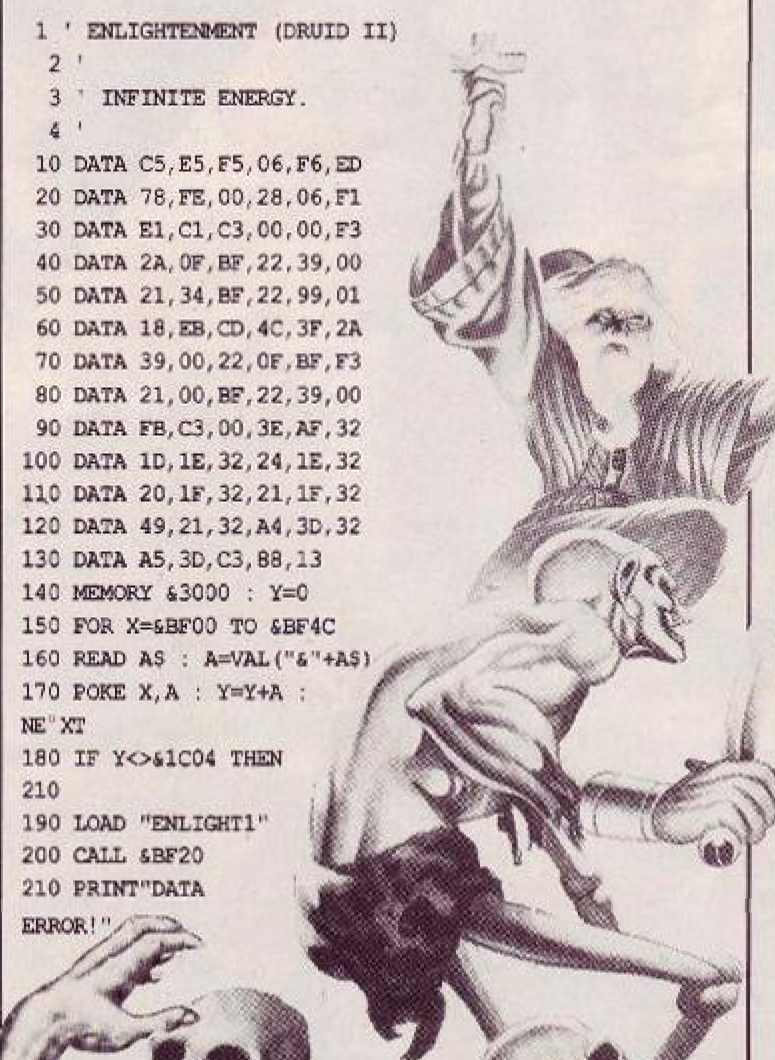
```
1 'robo-cop
2 '
3 'infinite energy
4 '
10 DATA 21,16,BD,36,C3,23
20 DATA 36,0E,23,36,BE,C3
30 DATA a5,99,21,17,BE,22
40 DATA 4F,A6,C3,08,A6,DD
50 DATA 21,b9,a8,11,ab,00
60 DATA CD,48,a8,21,2A,BE
70 DATA 22,62,a9,C3,e3,a8
80 DATA 3E,c9,32,f2,3e,C3
90 DATA 66,3f
100 y=0:MEMORY &5000
110 FOR x=&BE00 TO &BE31
120 READ a$:a=VAL("&"+a$)
130 POKE x,a:y=y+a:NEXT
140 IF y<>&1617 THEN 170
150 LOAD"ROBOCOP
160 CALL &BE00
170 PRINT"data error!"
```



## ENLIGHTENMENT (DRUID II)

Phil Howard has also been casting spells to revitalise any flagging druids, and has endowed the woodland priest folk with infinite energy.
(Tape method 1)

```
1 ' ENLIGHTENMENT (DRUID II)
2 '
3 ' INFINITE ENERGY.
4 '
10 DATA C5,E5,F5,06,F6,ED
20 DATA 78,FE,00,28,06,F1
30 DATA E1,C1,C3,00,00,F3
40 DATA 2A,0F,BF,22,39,00
50 DATA 21,34,BF,22,99,01
60 DATA 18,EB,CD,4C,3F,2A
70 DATA 39,00,22,0F,BF,F3
80 DATA 21,00,BF,22,39,00
90 DATA FB,C3,00,3E,AF,32
100 DATA 1D,1E,32,24,1E,32
110 DATA 20,1F,32,21,1F,32
120 DATA 49,21,32,A4,3D,32
130 DATA A5,3D,C3,88,13
140 MEMORY &3000 : Y=0
150 FOR X=&BF00 TO &BF4C
160 READ A$ : A=VAL("&"+A$)
170 POKE X,A : Y=Y+A :
NE'XT
180 IF Y<>&1C04 THEN
210
190 LOAD "ENLIGHT1"
200 CALL &BF20
210 PRINT"DATA
ERROR!"
```



# TAPE POKE METHODS

Here's how to input most Cheat Mode tape pokes – the instructions for each poke tell you which of the two to use. 664 and 6128 owners: first type |tape.

## Method 1

Rewind the game tape to the beginning, type in the poke listing and then type RUN and press the Enter key. (Don't use the key marked CTRL or Control, or the poke won't work.) Press the Play key on the cassette deck, then any key on the main keyboard - spacebar does nicely. The tape should now play through as normal.

## Method 2

Skip the first bit of the game program. To do this, rewind the game tape to the beginning; type in the listing; now type CAT and press Enter.

Start the tape by pressing Play and then any key. Soon you'll see the message: "Found something Block 1". It doesn't matter what the something is, and it varies from game to game. If the Cheat Mode instructions just tell you to skip the first block, stop the tape here. If the instructions tell you to skip things, stop the tape when the "Found" message comes up for the last thing you're trying to skip.

Once you've stopped the tape, press Escape, type RUN and press Enter. Now press Play on the tapedeck and any key on the keyboard to start the tape.

## OPERATION WOLF

That rumble in the jungle gets sorted by Mike Wong of Sale, as he gives the embattled solider, infinite energy, infinite grenades and infinite magazines (all a G.I. can read!).
(Tape method 1)

```
10 FOR n=&BE80 TO &BEC4
20 READ a$:a=VAL("&"+a$)
30 POKE n,a:c=c+a:NEXT
40 IF c<>7044 THEN 180
50 LOAD"":CALL &BE80
60 DATA 3e,c3,21,8e,be,32
70 DATA 16,bd,22,17,bd,c3
80 DATA fe,99,cd,37,bd,21
90 DATA 00,00,22,3c,a5,21
100 DATA a0,be,22,3f,a5,c3
110 DATA 00,a5,dd,21,a9,a7
120 DATA 11,00,01,cd,38,a7
130 DATA 21,b3,be,22,52,a8
140 DATA c3,d3,a7,3e,00,32
150 DATA 81,2c,3e,00,32,a0
160 DATA 2c,3e,a7,32,36,25
170 DATA c3,00,6a
180 PRINT"Error..." ●
```

And **Mapperley** man **Phil Howard** of also been whooping it up with 'wolfie boy from Ocean and gives him infinite lives.
(Tape method 1)

```
1 ' OPERATION WOLF.
2 '
3 'INFINITE ENERGY .
4 '
10 DATA 21,16,BD,36,C3,23
20 DATA 36,OE,23,36,BE,C3
30 DATA FE,99,21,17,BE,22
40 DATA 3F,A5,C3,08,A5,DD
50 DATA 21,A9,A7,11,00,01
60 DATA CD,38,A7,21,2A,BE
70 DATA 22,52,A8,C3,D3,A7
80 DATA 3E,A7,32,81,2C,C3
90 DATA 00,6A
100 MEMORY &3000 : Y=0
110 FOR X=&BE00 TO &BE31
120 READ A$ : A=VAL("&"+A$)
130 POKE X,A : Y=Y+A : NEXT
140 IF Y<>&1490 THEN 170
150 LOAD "OPERWOLF"
160 CALL &BE00
170 PRINT"DATA ERROR!" ●
```

## R-TYPE

After his outburst in its favour in *Reaction* last month, Mike Wong gives Electric Dreams' space bash treatment with infinite lives, infinite credits and just to cap it all, invulnerability. Makes you feel kind of sorry for those poor little Bydo people. Well, maybe not! (Tape method 1)

```
10 FOR n=&BE80 TO &BEBA
20 READ a$:a=VAL("&"+a$)
30 POKE n,a:c=c+a:NEXT
40 IF c<>6519 THEN 290
50 MODE 1
60 PRINT"1: INVULNERABILITY"
70 PRINT"2: INFINITE CREDITS"
80 PRINT"3: INFINITE LIVES"
90 PRINT:INPUT n
100 ON n GOSUB 140,150,160
110 FOR n=&BEB3 TO &BEB7
120 READ a$:a=VAL("&"+a$)
130 POKE n,a:NEXT
140 LOAD"":CALL &BE80
150 RESTORE 270:RETURN
160 RESTORE 280:RETURN
170 DATA 3e,c3,21,8e,be,32
180 DATA 16,bd,22,17,bd,c3
190 DATA 63,98,cd,37,bd,21
200 DATA 00,00,22,43,a5,21
210 DATA a0,be,22,46,a5,c3
220 DATA 00,a5,dd,21,b0,a7
230 DATA
11,ab,00,cd,3f,a7
240 DATA
21,b3,be,22,59,a8
250 DATA
c3,da,a7,3e,c9,32
260 DATA 08,35,c3,00,7a
270 DATA 3e,a7,32,9e,35
280 DATA 3e,00,32,10,35
290 PRINT"Error..." ●
```



## The only average sized black box

Multiface pokes from GRAHAM SMITH. (See last month's issue for an explanation of how to put these pokes into action.)

| Game | Address | Poke | Effect |
|---|---|---|---|
| *Dizzy* | | | |
| | 953A | 00 | Infinite lives |
| | 9518 | C9 | } |
| *Joe Blade II* | | | |
| | 156A | 00 | Infinite time, main game |
| | *24AD | 00 | Infinite time, sub game 1 |
| | *26B4 | 00 | Infinite time, sub game 2 |
| | *28D3 | 00 | Infinite time, sub game 3 |
| | *2319 | 00 | Infinite time, sub game 4 |
| | 1F94 | 00 | } Unlocks doors marked OUT |
| | 1F98 | 00 | } |
| | 1FDF | 00 | } Unlocks doors marked SCUM |
| | 1FDB | 00 | } |
| *Radius* | | | |
| | 8739 | 00 | Infinite lives |
| *Reflex* | | | |
| | 77B2 | 00 | Infinite power |
| *Spindrome* | | | |
| | 7C4A | 00 | } Infinite lives |
| | 7667 | 00 | } |
| *Zarkon* | | | |
| | 8B69 | 18 | Infinite lives |
| | 2B1F | C9 | Removes enemy craft |
| *Advanced Pinball Simulator* | | | |
| | 041B | 00 | Infinite balls |

● *Note: where * appears press the :/* key before entering these pokes to avoid poking the Multiface RAM*




# AA Buyers Guide

So you want to spend some money on your CPC? Well, first of all you need to know what's available. And here's the place to find it. We've listed the best and best known programs in each category, and given you the producer; the phone number; the price; the issue in which the item was reviewed; and last but not least, a brief description of the program's features and, where appropriate, shortcomings.

Don't take our word for it, though: we recommend you read the original review before you splash out, and, even better, ask the person from whom you're buying if it meets your particular needs. Best of all would be a try-out, if you can find a friend who already has what you're thinking of buying.

## WORD PROCESSING

### Brunword 6128

**Brunning Software ☎ 0245 252854 ● £16.50 tape, £25 disk ● reviewed *AA24***
40 or 80 column mode; spell checker loaded into extra memory. Suitable for expanded 128K machines. Superscript/subscript effects on-screen. Includes Datafile. Available as 'Junior Brunword' at £12.95 in slightly cut-down version.

### Mini Office II

**Database Software ☎ 051 357 2961 ● £14.95 tape, £19.95 disk ● *AA6***
If you don't need full specification *Mini Office II* is the one to buy. Remarkably cheap for word-processor, database and spreadsheet, plus comms software and more. Packaging and documentation good, and programs work in a menu environment.

### Pendown

**Logotron ☎ 0223 323656 ● £19.95 disk only ● *AA18***
A complete tutorial in the theory and practice of word processing – it's great fun, too. Open system, owing much to expensive DTP packages.

### Protext

**Arnor ☎ 0733 239011 ● £19.95 tape, £26.95 disk, £39.95 ROM ● AA3**
Lightning fast on all tasks involving screen. True merging from separate files and disks to the cursor position is easy and *Protext* supports standard CPC RSX's like DISC, TAPE, CAT etc. ROM version is excellent. Bad points: maximum file space limited to machine memory – about 22K on disk, 38K for the ROM version. As used by *AA*, if that's any recommendation.

### Pyraword

**Discovery ☎ 0742 753423 ● £14.95 tape, £17.95 disk ● *AA18***
Similar in use to Discovery's *Pyradev*. It loads a profile of inks, printer codes and character set. Word counting, changing disk drives etc – 'housekeeping' tasks – are handily located. Uses extra memory of 128K machines for spooling printed documents and storing text. True file merging is impossible, and control keys are odd. Margins cannot be set further apart than 80 columns, although placing a printer control character at the right hand side allows wider documents to be printed.

### Tasword

**Tasman Software ● 0532 4388301**
**● 464, 464D, 6128 ● £19.95 tape, £24.95 disk ● *AA1***
464 is the tape based version (the same as *Amsword*). 464D has enhancements for a disk drive. 6128 makes full use of a 6128's extra memory. The latter pair include mailmerge facility. Easy to get to know: comprehensive help screens. Screen operations are slow, andtext is reformatted a word at a time.

### Wordstar

**Micropro/Cumana ☎ 0483 571666 £49.95 disk only (CPM) ● *AA1***
Files can be as big as the space available. A professional program, with huge manual and a layout like mission control. If you want a function, it is in there... somewhere. Not fast.

## PRINTERS

*Manufacturers' recommended retail prices are listed as guidelines, but heavy discounts are offered by retailers.*

### Amstrad DMP/2160

**Amstrad ☎ 0277 230222 ● £159.95 ● *AA6***
Load through front: printer must be above paper; but loading continuous stationery is easy. Poor NLQ mode. £5 for ribbons. Low priced, rather than a bargain.

### Amstrad DMP3160

**Amstrad ● £228.85 ● *AA29***
Similar to but faster than DMP2160. Accepts all IBM and Epson printing codes. NLQ is front loading system. Good buy.

### Amstrad DMP4000

**Amstrad ● £401.35 ● *AA20***
A real text cruncher. Wide carriage, and really flies across the paper, up to about 200 cps (in NLQ about 50 cps). Fonts available: standard 9 pin Pica, Elite, condensed etc. – but they are different, rather than just adjusted spacing for the same characters.

### Amstrad LQ3500

**☎ 0277 230222 ● £401.35 rrp ● AA31**
Cheapest 24-pin printer. Paper loaded from the rear – more time consuming. 30 cps in letter quality mode, and 62 cps in draft. Print quality excellent: plenty of different type-styles built in. Not ultra fast.

### Citizen 120D

**Citizen ☎ 0800 282692 ● £159 ● *AA43***
Dimensions: 3.7 kgs, and 370mm x 90mm x 238mm. Draft quality is 'dott,' and poor, but NLQ is sharp and simple. A quiet beast, with cable to the computer connected on the side. Manual includes a complete written breakdown of all the printer control commands, and their effects.

### Epson LX800

**Epson ☎ 01 902 8892 ● £320.85 ● AA29**
*Very* fast for 9 pin. Control panel for style selection, and Epson compatible. Reverse winding sheets requires care, though.

### Epson EX800

**Epson ● £458.85 ● *AA29***
Upgradable in 101 ways – cut sheet feeds, serial ports, longer life ribbons. Quiet, with respectable printing speed. Sans Serif/Roman NLQ fonts incorporated. Control panel to select fonts – just the same font with different spacings.

### Epson LQ500

**Epson ● £803 rrp ● *AA29***
Features galore and price to match. Handles both Sans Serif and Roman styles of NLQ, for instance. Colour-printing upgrade kit available. 24 pin printer, offering

excellent quality printing. Control panel to select from many available fonts (ie. the same font at different widths).

## Mannesmann Tally MT81

**Mannesmann Tally ☎ 0734 788711 ● £149 ● *AA43***

Dimensions: 70mm X 100mm X 265mm; weight, 4.5 kgs. Draft quality is 'dott,' and poor, but NLQ is sharp and simple. Prints Epson and IBM graphics. Draft mode print quality is good: square printhead pins put ink onto greater areas. The printed output is more ornate than the Citizen. Manual is superb, but falls down in failing to explain control codes: for that you have to buy the applications manual. Certainly a very good buy.

## Panasonic KXP3131U

**Panasonic ☎ 0753 73181 ● £335.25 (discont.) ● *AA29***

Daisywheel therefore superb quality – but can't print bit graphics (no trendy screen dumps), and if you want different fonts, you have to plug in a different Diablo-compatible one. Not quiet.

## Panasonic KXP1081

**Panasonic ● £245 rrp ● AA29**

Similar to DMP2000/2160: chunky, 9 pins, 10 inch carriage and compatible with Epson codes. Thorough A4 manual, good NLQ mode – better than DMP – and condensed, draft and NLQ modes.

## Star LC10

**Star ☎ 01 840 1800 ● £263.35/£297.85 rrp ● AA32**

First price is for standard dot matrix printer. Fonts selected by button, rather than typing in fiddly control code. Second price is for relatively inexpensive colour model. Uses multi-colour ribbon to produce different mixes. Plastic paper feeder on both models.

# INTEGRATED PACKAGES

## Info-Script

**Brunning ☎ 0245 252854 ● £46 disk only ● 128K/256K only ● *AA35***

Billed as the 'complete database with word-processor and spelling checker', it's best with 256K. Well set up, easy to use and allows for changes in layout and content. Manual could be clearer.

## Mini Office II

**Database ☎ 051 357 2961 ● £14.95 tape, £19.95 disk ● *AA6***

Astonishingly cheap word processor, database, spreadsheet, graphics, comms and label printer all-in-one, it's continued to sell, and sell, and sell... Not full specification, but at this price who's complaining?

## Protext Filer/Office

**Arnor ☎ 0733 68909 ● £24.95/£34.95 disk only ● *AA34***

Database that works comfortably with *Protext*, has powerful sorting options and comprehensive invoice printer. Can be slow, but good value.

# EDUCATIONAL PROGRAMS

## Arc Education Master Pack

**Arc Education ☎ 0472 812226 ● £48 disk ● *AA32***

A massive pack of 70 programs: Junior; Primary; a parent/child adventure; DR Logo and word games. Each set available at £9 tape and £12 disk. Well presented with good graphics, reasonable musical ditties and plenty of options.

## Wordhang

**Bourne Education ☎ 0794 523301 ● £9.95 cassette; £14.95 ● *AA32***

Just one of Bourne's range of ten programs. Others include *Happy Letters, Numbers* and *Writing* (all Infant); *Timeman One/Two, Animal Vegetable Mineral, World-Wise* and *Map Rally* (all Junior); and the excellent *Chemistry* and *Physics Revision* (Senior).

## Amstrad Educational Selection

**Fernleaf Education ☎ 0474 359037 ● £12.50 tape, £17.50 disk ● *AA32***

For age range 7 to 12+: seven programs – *Fletcher's Castle, Market Stall, The Perfume Hunter, The Raiders, Ferry Captain, Treasure,* and *Thorn Sea*.

## Kosmos

**Kosmos ☎ 05255 3942 ● £xx disk ● *AA32***

*Answer Back Junior Quiz*, which began life on the BBC micro, is just what it sounds like: a 750 question quiz, in which you can choose to answer the question, make a choice from a number of options; or say whether something is true or false. There's also *Factfile 500*, sets of additional questions for the program: arithmetic, spelling, sport and natural history.

Kosmos' other range is a foreign language vocabulary tutor in French, Spanish, German and Italian.

## LCL

**LCL ☎ 0491 57345**

Range of Amstrad educational software. Leave message on answerphone and they won't send you a catalogue. At least, they didn't send me one. Still, I'm sure they do really terrific stuff, whatever it is.

## School Software

**School Software ☎ 010353 6145399 (Ireland) ● *AA32***

A charming Irish lady takes your name and address. Three weeks later you still haven't heard anything, and you're supposed to write a summary for *Buyers Guide*. Sometimes I wonder why I didn't become a fireman after all.

● *See also* Pendown *in* 'Word Processing'

# BUSINESS/ACCOUNTS

## Protext Office

**Arnor ☎ 0733 68909 ● £34.95 ● CPM+, 6128 only ● *AA34***

Requires *Protext* and *Promerge* to run. Information inputted using *Protext*. Mail merge templates included, and very well implemented invoice printing feature. A genuinely useful business system.

## SD Microsystems range

**☎ 056681 511**

**General Ledger ● £19.95 ● *AA32***
**Sales Invoicer Pack ● £14.95 ● *AA26***
**Small Traders Pack ● £24.95 ● *AA26***
**Stock Control ● £39.95 ● CPM+, 6128 only ● *AA32***

SD Microsystems are to be congratulated for their range and quality of small business systems. Consult original reviews for in-depth explanations of what each does and how it differs from the others.

# DATABASES

## AtLast Plus

**Rational Solutions ☎ 056681 511 ● £39.95 ● CPM+, 6128 only ● *AA30***

Powerful: developed into user's requirements. Data capacity restricted only by disk size, and splitting fields into smaller elements possible. Printed output impressive. Beefy processing.

## Masterfile III

**Campbell systems ☎ 0378 77762 ● £39.95 CPM+ ● *AA30***

With parent/child records – enabling tying together of records, saving space and time. Screen layouts and reports menu selected: not for faint hearts, but good results.

## Random Access Database

**Minerva Systems ☎ 0392 37756 ● £29.95 disk only ● reviewed *AA6***

40 or 80 column screen. Good mathematical and string operations . Random disk accessing gives speed and power.

● *See also* Info-Script *in* '4. Integrated Packages'

# SPREADSHEETS

## Cracker

**Newstar Software ☎ 0277 229509 ● £49.95 disk CPM+ ● *AA9***

Spreadsheets must be created from scratch. Documentation good, command sequences soon learned. Mathematical functions well done, with random numbers catered for. Files limited to 17K – and formulae programming not well implemented.




## Mastercalc 128

**Campbell Systems ☎ 0378 77762 ● £33 disk ● 128K machines ● *AA4***
Can show two parts of spreadsheet at once. Includes notepad and calculator. Easy to use, but the mathematical formulae can only consist of the four basic arithmetic options. Slows down as more data is entered.

## Matrix

**Audiogenic Software ☎ 0734 303663 ● £34.95 disk ● *AA18***
Uses disk to store data – so good capacity on the plus side, but poor speed on the minus side. Graphic options excellent. Onscreen prompts rare, making it hard at first. Calculating power good.

## Supercalc II

**Amsoft/Sorcim ☎ 0277 230222 ● £49.95 CPM+ ● *AA4***
First class documentation. Calculations can be determinative – performed on whether or not cell's contents match given value. Excellent help prompts and arithmetic functions.

# SOUND

## Amdrum

**Cheetah ☎ 0222 555525 ● £34.95 ● *AA13***
Digital drum machine. Editor comprehensive. Not Midi compatible; to hear output you plug it into amplifier.

## DHCP Midi Interface

**DHCP ☎ 0440 61207 ● £69.95 interface, £34.95+ disk software ● *AA33***
DHCP produce Midi software for various Midi interfaces for CPC, which are incompatible with each other.

## Micro Music Creator

**First Byte Software ☎ 0225 765086 ● £14.95 disk, £24.95 ROM ● *AA38***
A music composer that lets you put staves and notes onscreen and play tune back. Accents can't be inserted, though. Other side is sampler to capture sounds from tape and play them through CPC. Excellent.

## Midi Interface

**Silicon Systems ☎ 061 848 8959 ● £59.95 interface, £59.95 software ● *AA26***
Useless alone, but software you can use with it – DX7, FB01, MT32, D50 and CZ101 – is diverse. Software prices vary, and lack presentation of EMR sequencer. High performance.

## Miditrack Performer

**EMR ☎ 0702 335747 ● £92.50 cass/disk ● *AA13***
Midi interface plus sequencing software to drive Midi equipped instruments. Records each instrument then plays them all at once. Onscreen layout similar to multi-track recorder. Excellent.

## Ram Music Machine

**RAM Electronics ☎ 0252 850085 ● £49.95 disk, £59.95 disk ● *AA17***
All in one music package: Midi interface, sound sampler and music editor. Sampler can handle one sample of just over a second. Midi controller software and music editor comprehensive. No through port, though, so 464 users must use tape version. And you can't edit live played Midi compositions.

## Sound Blaster

**Siren Software ☎ 061 848 8959 ● £29.99 ● *AA23***
Amplifier and pair of loudspeakers that plug into CPC for maximum 2 watts sound effects.

## Speech Synthesizer

**DK/RAM Electronics ☎ 0252 850085 ● £35, £40 ROM**
Add-on producing speech by RSX's: loudspeakers supplied. Cannot include speech in program for someone else's CPC, though. Even so, excellent speech quality and value.

# VISION

## Advanced Art Studio

**EEC ☎ 0753 888866 ● £19.95 disk ● *AA21***
Recently revitalised, this is *the* user-friendly, best and most powerful art package: works in all three modes. Can cycle through inks, and cut and paste different areas, transformations and reflections. Fill routines in coloured patterns. Available as a standard version for £15.95.

## AMX Art

**Advanced Memory Systems ☎ 0925 413501 ● £69.95 disk only (includes mouse) ● *AA7***
User friendly, if little unsophisticated compared to *Advanced Art Studio*, but mouse helps greatly. Colour, spraycans, textures, circles and host of other features.

## AMX 3D Zicon

**Advanced Memory Systems ● £39.95 disk only ● *AA24***
Best with mouse, produces wire frame constructions: design in 3D and view from all angles. Slow when calculating heavy maths. Note supplies are scarce, and AMS don't plan more.

## Cherry Paint

**Siren Software ☎ 061 228 1831 ● £9.99 disk only ● *AA20***
WIMP controlled – ie mouse moves pointer to various icons to pull-down menus. B/W mode 2 only, but fun. Curves are difficult, but a bargain.

## CRL Image System

**CRL ☎ 01 533 2918 ● £14.95 disk/tape ● *AA12***
Boasts range of picture manipulations and distortions, but lacks art options. Best on finished pictures – like a mini Quantel box.

## DART Scanner

**Dart Electronics ☎ 0502 513707 ● £79.95 ● *AA22***
Attach reading device to your DMP2000, 3000 or 3160. Feed in picture to printer: device reads in picture as B/W image. Quality onscreen isn't amazing, but it works and it's fun.

## Electric Studio Light Pen

**Electric Studio ☎ 0462 420222 ● £19.95 tape, £29.95 disk ● *AA1***
Excellent drawing software, including rubber-banding shapes and lines, filling areas, spray-can etc. Accepts software written for it.

## The Informer

**Treasure Island Software ☎ 0492 593549 ● £29 disk only ● *AA33***
For creating animated displays, suitable for classroom and shop window: takes text, graphics and animated displays and produces slide show. Works best but not only with *Parrotry Plus* (see below).

## Model Universe

**Arnor ☎ 0925 413501 ● £15.95 tape, £19.95 disk ● *AA16***
3D design program: cheaper than *3D Zicon*, but not as friendly. Excellent manual. Supports Tandy CGP-115 and MCP40 plotters.

## Parrotry Plus

**Treasure Island Software ☎ 0492 593549 ● £19.95 disk only ● *AA30***
Rather than lots of effects used anywhere and at any time, *Parrotry Plus* 'remembers' every alteration and plays through the list to create animation. Note: can't dump pictures to printer without external program.

## Vidi Digitizer

**Rombo Productions ☎ 0506 39046 ● £89.95 ● *AA15***
Grabs picture from video recorder or camera and puts it on CPC screen, allowing you to alter it with an package. Easy to use. Software on tape, disk or ROM includes superb printer dump routine. ●

**● Corrections, additions or ideas for sections you think should be here are very welcome. Drop a line to: *AA Buyers, Amstrad Action*, 4 Queen St, Bath BA1 1EJ**

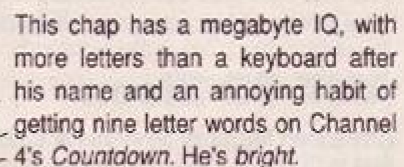
Don't miss the next *AMSTRAD ACTION*-packed issue – out on *Thursday APRIL 13th!*

# AAfterthought

***You did remember to do Aafterthought, didn't you Steve?***

## The CPC character set

### 4. The technical boffin



This chap has a megabyte IQ, with more letters than a keyboard after his name and an annoying habit of getting nine letter words on Channel 4's *Countdown*. He's *bright*.

Bought his 464 when he was 11 at university, but now, four years later, it's hard to say what computer he has. On a jumbo-sized desk in his chaotic study sits a quarter of a ton of solid state hardware, flashing and buzzing to itself. Quadraphonic surround-u-sound, ultra high res monitor, 1Mb RAM, a plethora of disk drives, and his pride and joy: a DIY laser printer. Assembled from a secondhand microwave oven, some Meccano and 35' of heavy-duty wire, it requires the user to wear a protective lead vest – and remember to run if you smell something cooking. (His mum still hasn't forgiven him for what happened to the cat.)

But what does he *do* with all these live wires and dodgy kit? Well, not a lot. He keeps overloading the ring mains at crucial moments, and having to find 40 amp fuse wire (he's discovered that piano wire works just about right, and so far his sister – who doesn't practice as much as she should – hasn't noticed).

He has big plans for a half-price CPC compatible to out-Amstrad Amstrad, with firmware produced with MAXAM and an EPROM programmer. It'll have an ST/Amiga emulator, too – something to do with running two CPCs in parallel.

His social life is, well, limited. Not many people are interested in 'weight states, fascinating: you'd have thought a 150 nano-second CMOS ROM was OK, but I bought a batch of 500. None of them seemed to work! Ah well, you live and learn.' There aren't too many girls turned on by that kind of talk.

He does have a lot of fun at his MENSA meetings, though, doing his party trick of solving Rubik's cube blindfolded. He remembers the colours, you see. Most amusing, though lately there have been one or two barbed comments. Don't they understand? He's a genius, you see, and you have to make allowance for genius...

● Next month's member in the CPC character set will be as much of a surprise to us as it will to you

## Hands off muh *AA*, pardner!

*To the newsagent: Amstrad Action is distributed by Seymour Press*

**Dear newsagent,**

**Please reserve me one copy of the May *Amstrad Action*, due out on 13 April**

**Name:**

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**If you're under 16, please get your parent or guardian to sign here:**



That's it, folks, as another *AA* runs out of petrol, and if you've enjoyed reading it half as much as we've enjoyed writing it, then we've enjoyed writing it twice as much as...

We *did* have it in mind to tell you what we plan for next month, but we knew you wouldn't believe it could all be fitted in one magazine, so we won't. Instead here's Steve's favourite joke. This white horse goes into a bar, and the barman says, 'We've got a drink named after you.' 'What,' says the white horse, 'Eric?'

Well, it makes him laugh.



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SEE OVER PAGE FOR ORDER FORM

SPECIAL OFFERS

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**Sales Ledger**
**Stock List**
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Invoices, statements and credit notes can be printed on plain paper, standard computer listing sheets or your own letter-headed paper.

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"Well put together small business system - should prove popular." (AA March '89 - Issue 42)

**Order Code AA394**

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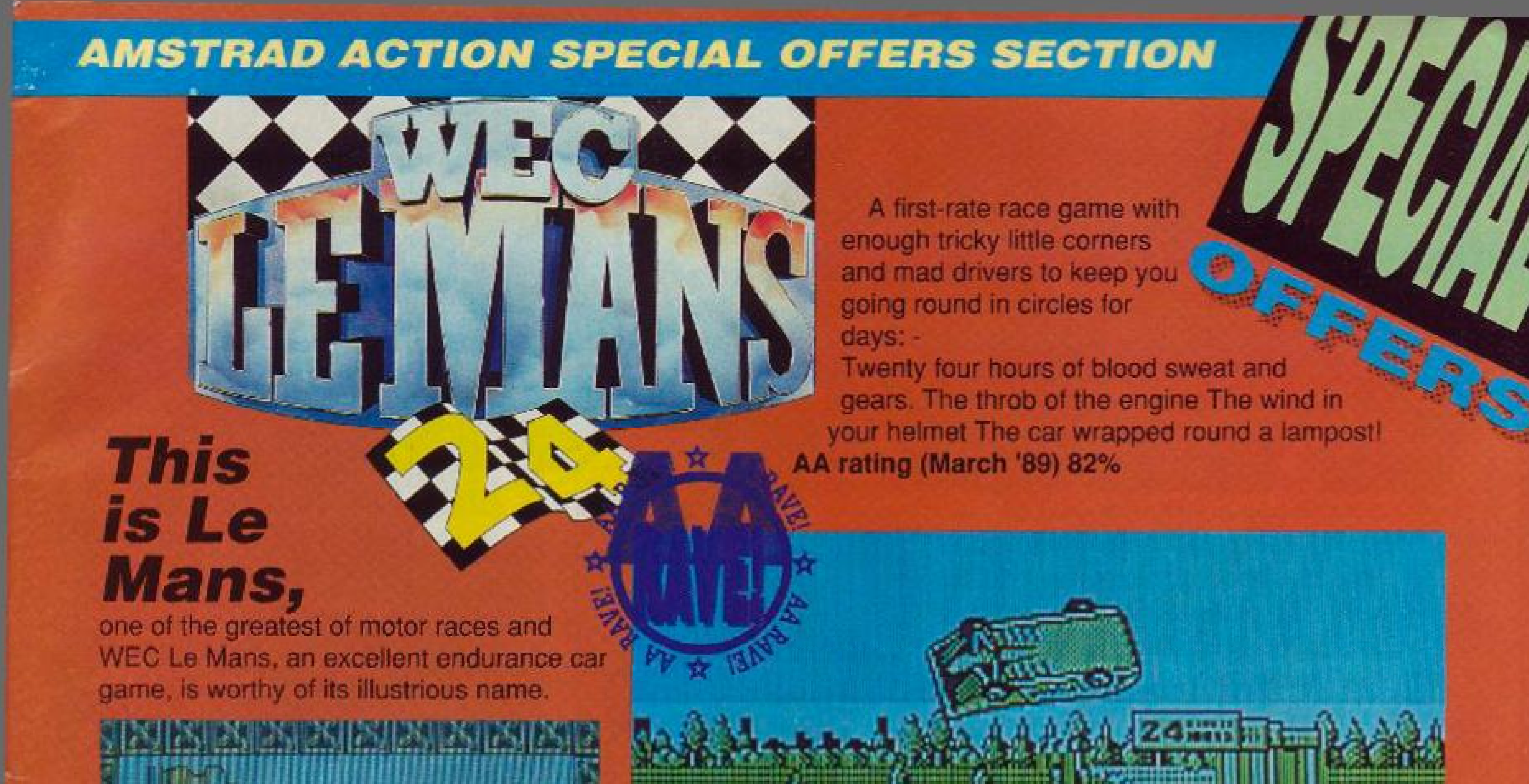
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LOOK OVER PAGE FOR DETAILS




A first-rate race game with enough tricky little corners and mad drivers to keep you going round in circles for days: - Twenty four hours of blood sweat and gears. The throb of the engine The wind in your helmet The car wrapped round a lampost!

**AA rating (March '89) 82%**

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Microprose's rock solid reputation is based largely on the simulation of technology. With Airborne Ranger you control a man rather than a machine in an action strategy game of battlefield drane using skills and brain power instead of high technology - keep your wits about you and play the game...




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**AA Rating 90% (AA March '89)**

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## MINI OFFICE II

### £12.95 tape £17.95 disk (RRP £14.95/£19.95)

Database's combined word processor, database, spreadsheet, label printer, communications and graphics package and offers the best value for money in any eight-bit integrated package.

Suitable for any CPC (it doesn't run under CP/M). AA called Mini Office 'good enough to fulfil the entire software needs of many a small business!'. That is borne out by the sales figures - more than 400,000 users across the country.

The figures testify to the features. You can build a versatile card index, produce pie charts, access Prestel and other comms networks and run off personalised letters. Altogether, you may never need any other program once you've got Mini Office II. Time to get serious?

**Order Code AA388C**

**Order Code AA388D**

SPECIAL OFFERS

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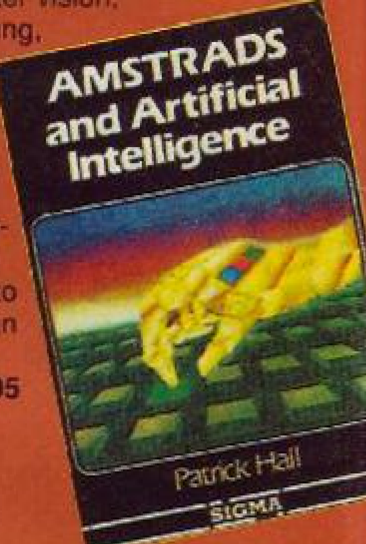
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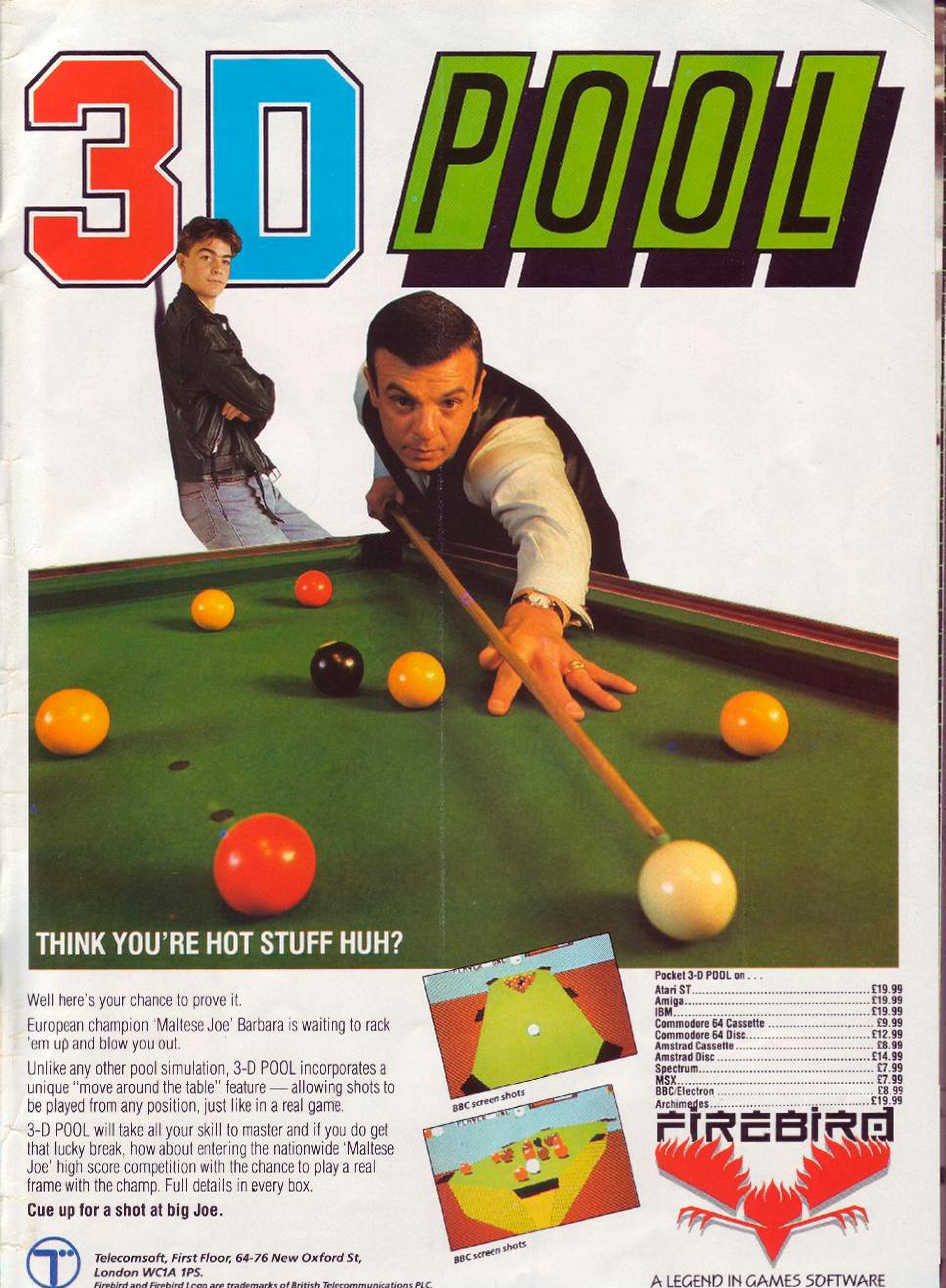
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